US009465506B2

(12) **United States Patent**
Chen

(10) **Patent No.: US 9,465,506 B2**
(45) **Date of Patent: Oct. 11, 2016**

(54) **SYSTEM AND METHOD FOR DISPLAYING ADDITIONAL INFORMATION ASSOCIATED WITH A MESSAGING CONTACT IN A MESSAGE EXCHANGE USER INTERFACE**

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(73) Assignee: **BlackBerry Limited**, Waterloo, Ontario (CA)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 489 days.

(21) Appl. No.: **13/211,670**

(22) Filed: **Aug. 17, 2011**

(65) **Prior Publication Data**

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(51) **Int. Cl.**

G06F 3/0481	(2013.01)
G06F 3/0482	(2013.01)
H04M 1/725	(2006.01)

(52) **U.S. Cl.**

CPC ***G06F 3/0481*** (2013.01); ***G06F 3/0482*** (2013.01); ***G06F 3/04817*** (2013.01); *H04M 1/72552* (2013.01)

(58) **Field of Classification Search**

CPC .. G06F 3/0481; G06F 9/4443; G06F 3/0482; G06Q 10/107; H04L 12/585; H04L 12/581; H04L 12/5855; G09G 5/14; H04M 1/72552

USPC 715/765, 808; 709/206

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

7,266,776	B2	9/2007	Quillen et al.
7,278,108	B2	10/2007	Duarte et al.
7,284,002	B2	10/2007	Doss et al.
7,584,258	B2	9/2009	Maresh
7,606,866	B2	10/2009	Mora
7,617,457	B2	11/2009	Kortum et al.

(Continued)

FOREIGN PATENT DOCUMENTS

CA	2716850 A1	4/2011
EP	2224653 B1	6/2011
WO	WO 2011/069018 A1	6/2011

OTHER PUBLICATIONS

Goldring, D; Extract from iWindows Mobile Updates SMS-Chat; May 9, 2008; taken from http://www.mytodayscreen.com/iwindows-mobile-updates-sms-chat/.

(Continued)

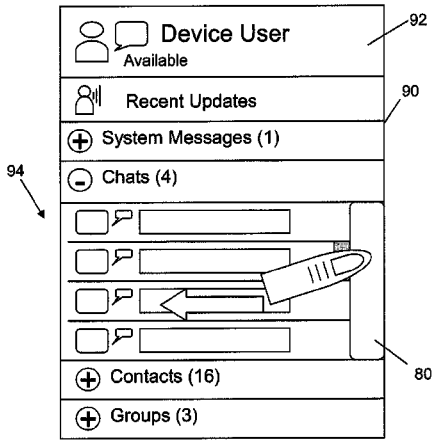
Primary Examiner — Li Sun

(74) *Attorney, Agent, or Firm* — Jeffrey N. Giunta; Fleit Gibbons Gutman Bongini & Bianco P.L.

(57) **ABSTRACT**

An unobtrusive tab is provided in a user interface (UI) used in communicating with a contact, for providing a notification of new information, and to enable access to the information or a representation of the information. The items provided in the information pane may also be selectable to enable further information to be displayed, e.g. an application related to or containing the selected item. Various data items can also be associated with items in the information pane in order to enable further content and information to be launched through selection of an item in the information pane. The information pane can be used as an alternative communication channel and portal for sending and receiving data items such as links, pictures, or other attachments to enable sharing between contacts without disrupting or cluttering a conversational exchange or consuming resources in a particular communication medium.

18 Claims, 21 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

7,631,042	B2	12/2009	Chen et al.	
7,707,226	B1	4/2010	Tonse	
7,707,286	B2	4/2010	Gundu et al.	
7,711,810	B2	5/2010	McKinnon et al.	
7,844,667	B2	11/2010	Ito et al.	
7,996,045	B1 *	8/2011	Bauer	G06F 3/0488 455/466
8,099,464	B2 *	1/2012	Cooperman et al.	709/206
2003/0208543	A1 *	11/2003	Enete et al.	709/206
2005/0055405	A1	3/2005	Kaminsky et al.	
2005/0165880	A1 *	7/2005	Moody et al.	709/200
2006/0004911	A1	1/2006	Becker et al.	
2006/0020904	A1	1/2006	Aaltonen et al.	
2006/0031341	A1	2/2006	White et al.	
2006/0048061	A1	3/2006	Forlenza et al.	
2006/0085752	A1 *	4/2006	Beadle et al.	715/751
2006/0190117	A1	8/2006	Weczorek et al.	
2007/0113181	A1	5/2007	Blattner et al.	
2007/0168863	A1	7/2007	Blattner et al.	
2007/0179037	A1	8/2007	Dobrovolsky	
2007/0260730	A1	11/2007	Gadwale	
2008/0040675	A1	2/2008	Canfield et al.	
2009/0006566	A1 *	1/2009	Veeramachaneni et al.	709/206
2009/0063677	A1	3/2009	Forlenza et al.	
2009/0249247	A1 *	10/2009	Tseng et al.	715/808
2010/0075650	A1	3/2010	Tsai et al.	
2011/0296312	A1 *	12/2011	Boyer	G06F 3/0488 715/736

OTHER PUBLICATIONS

Linco, R.; Search Report from corresponding PCT Application No. PCT/CA2012/050563; search completed Dec. 4, 2012.

Amarotti, M.; Search Report from corresponding European Application No. 11177822.1; search completed Jan. 23, 2012.

* cited by examiner

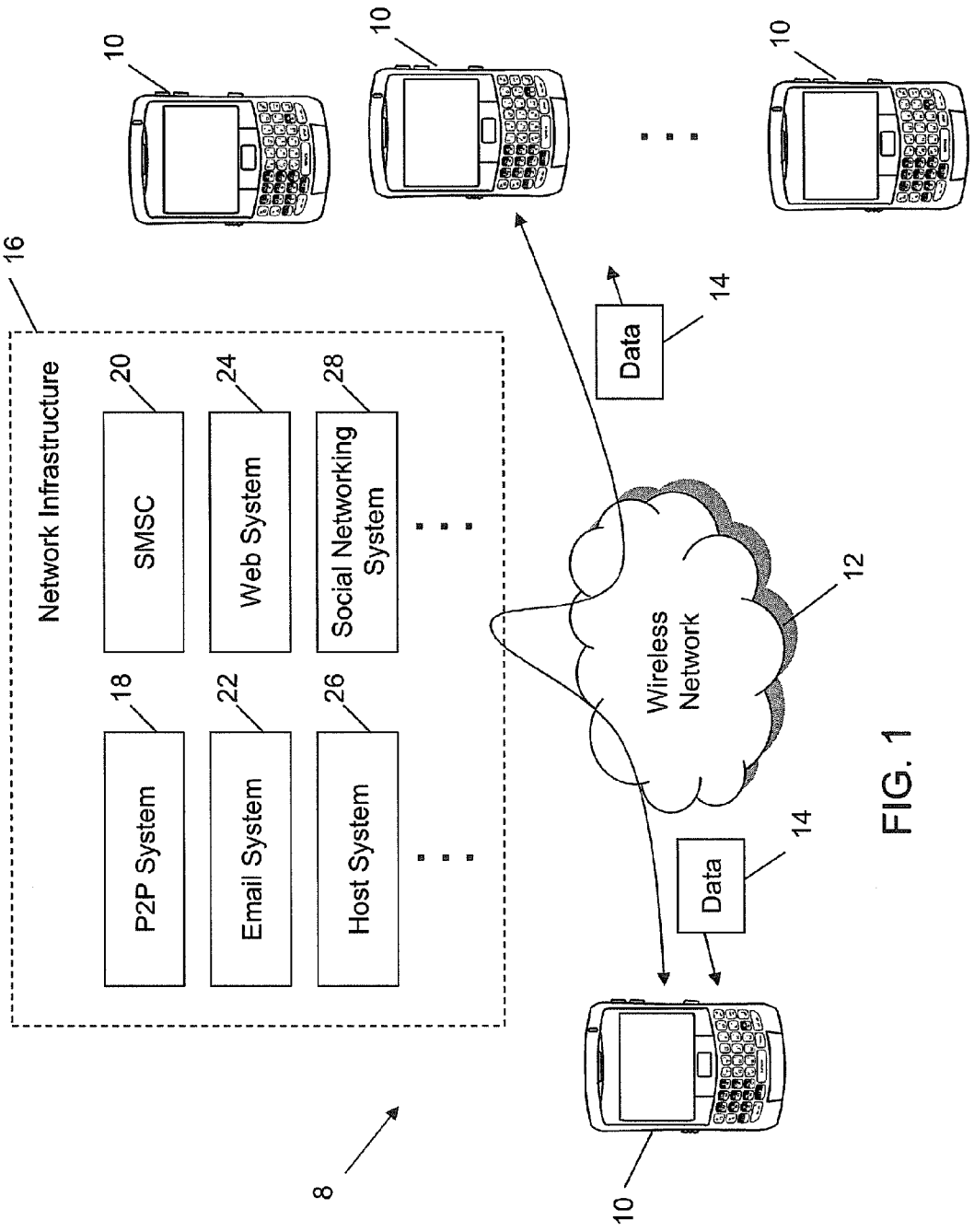

10
10
10
16
Network Infrastructure
20
SMSC
24
Web System
28
Social Networking System
18
P2P System
22
Email System
26
Host System
Data
14
Wireless Network
12
Data
14
10
8

FIG. 1

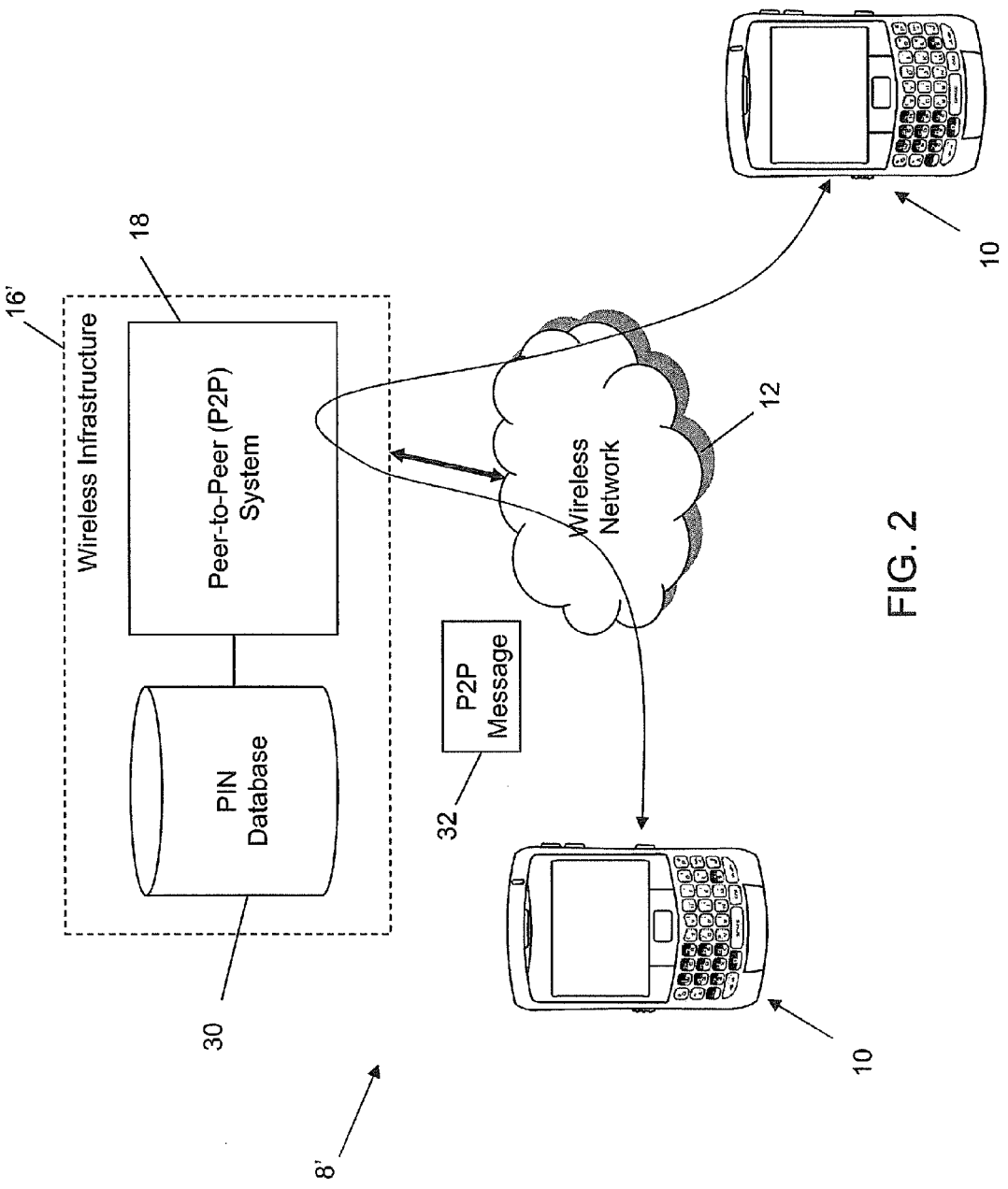

8'
16'
Wireless Infrastructure
18
Peer-to-Peer (P2P) System
PIN Database
30
Wireless Network
12
P2P Message
32
10
10

FIG. 2

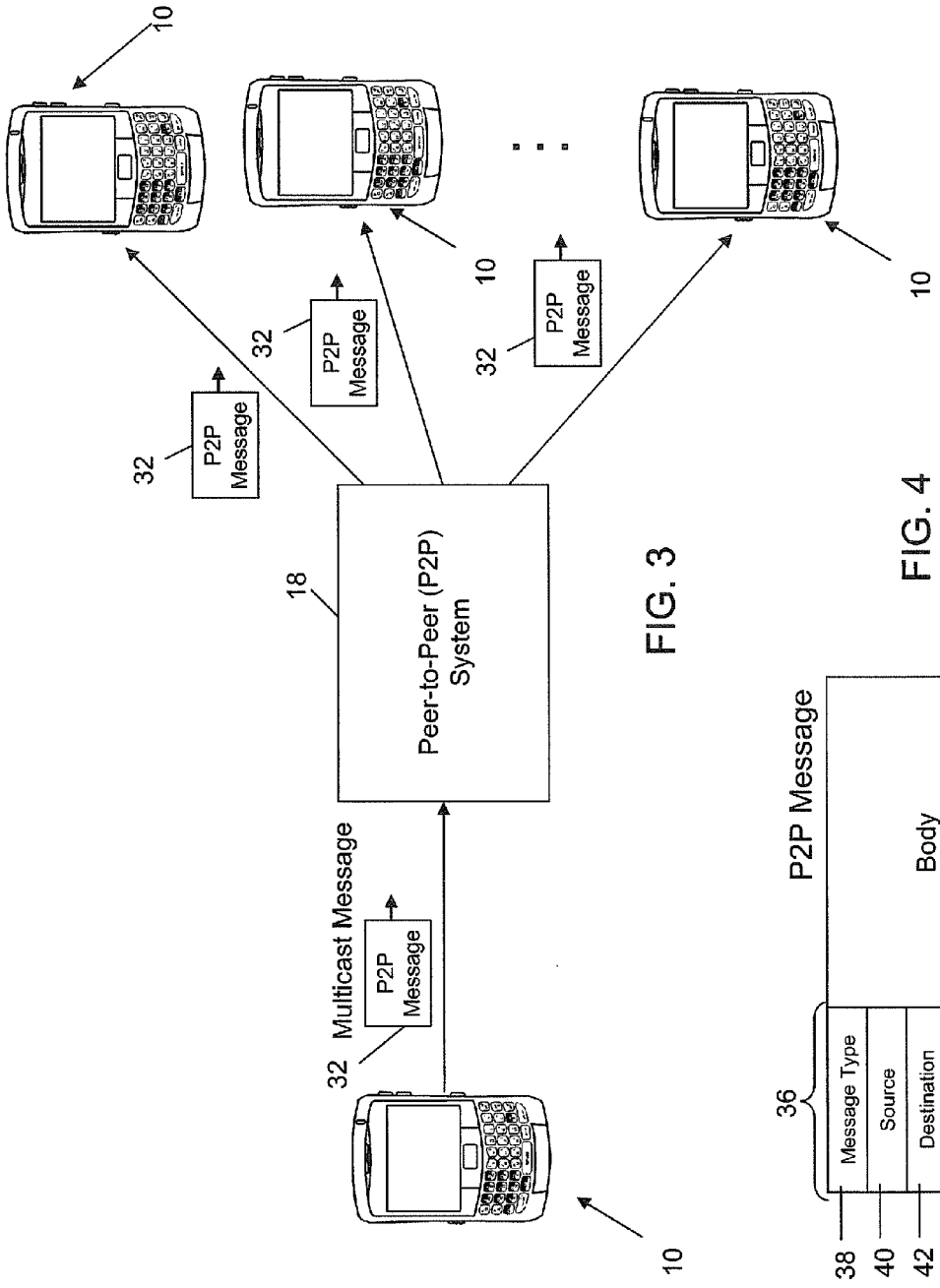

10
10
10
10
32
P2P Message
32
P2P Message
32
P2P Message
18
Peer-to-Peer (P2P) System
Multicast Message
32
P2P Message
10

FIG. 3

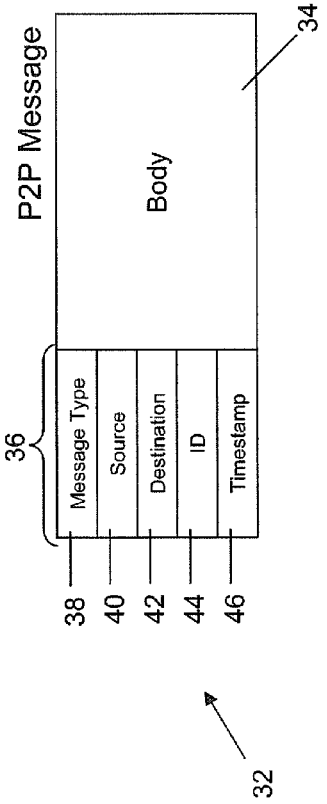

P2P Message
34
Body
36
Message Type
Source
Destination
ID
Timestamp
38
40
42
44
46
32

FIG. 4

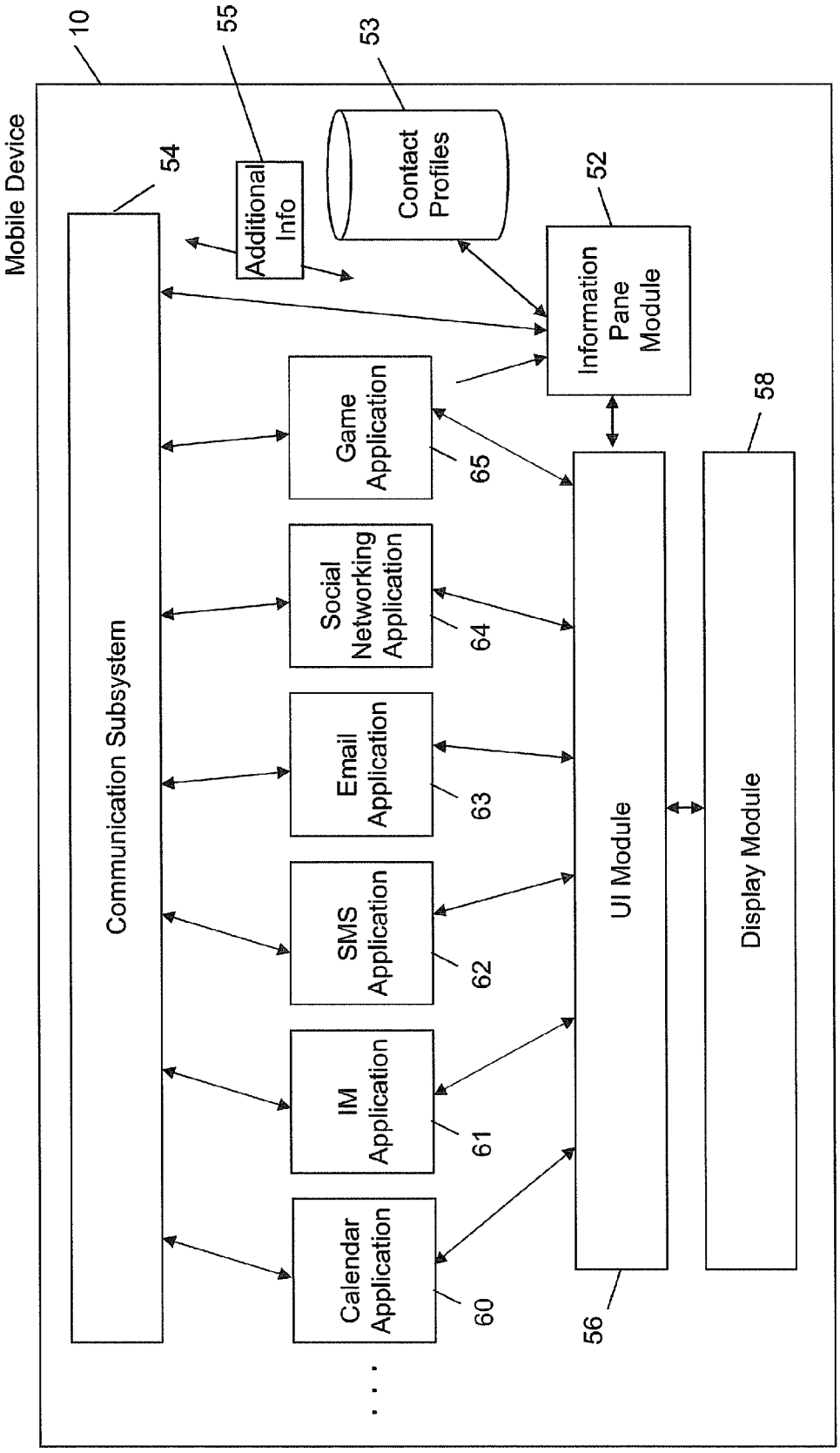

Mobile Device
10
55
53
54
Additional Info
Contact Profiles
52
Information Pane Module
Communication Subsystem
Game Application
65
Social Networking Application
64
Email Application
63
SMS Application
62
IM Application
61
Calendar Application
60
. . .
UI Module
56
58
Display Module

FIG. 5

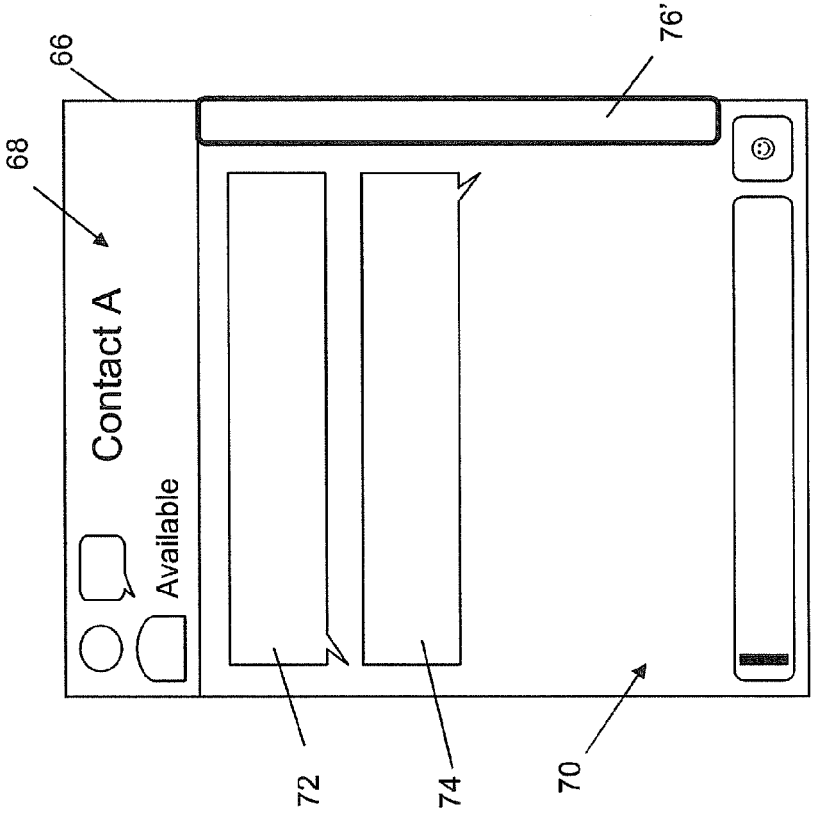

66
68
76'
Contact A
Available
72
74
70

FIG. 7

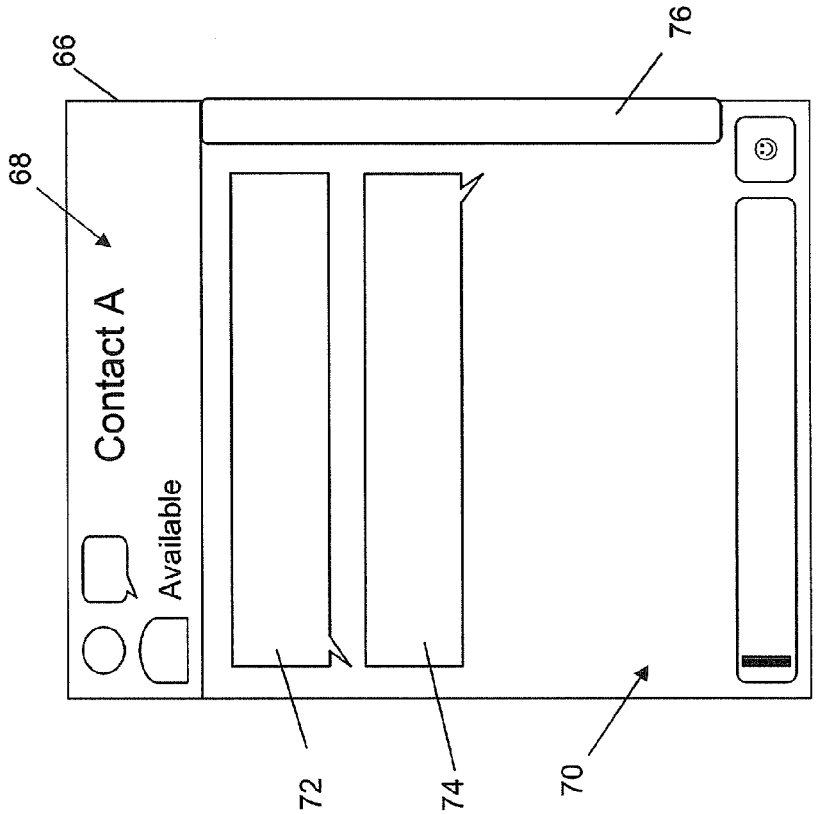

66
68
76
Contact A
Available
72
74
70

FIG. 6

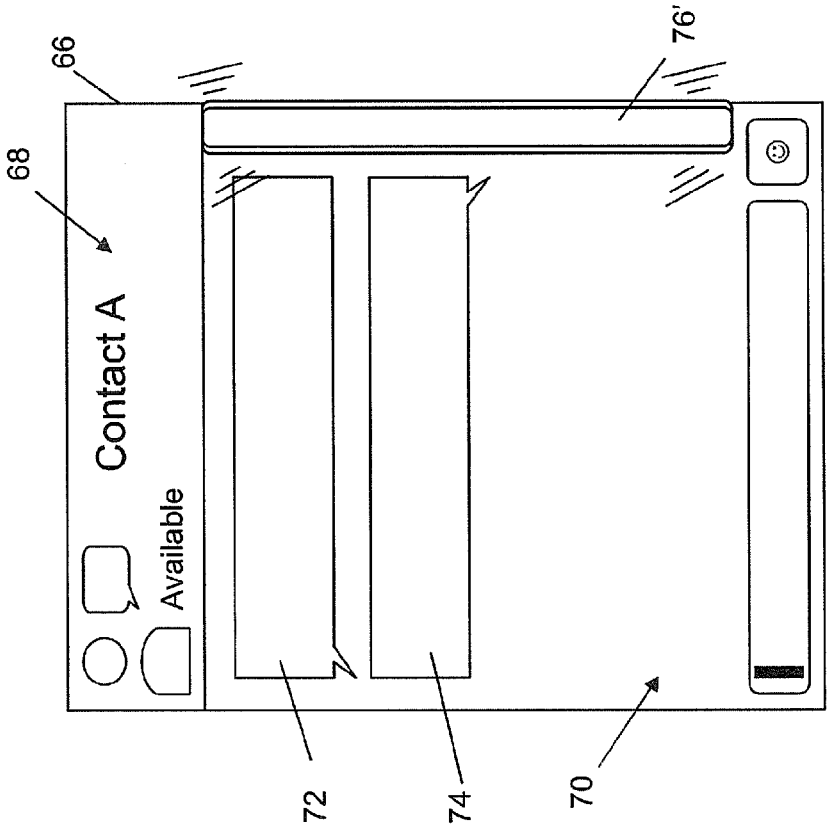

66
68
76'
Contact A
Available
72
74
70

FIG. 9

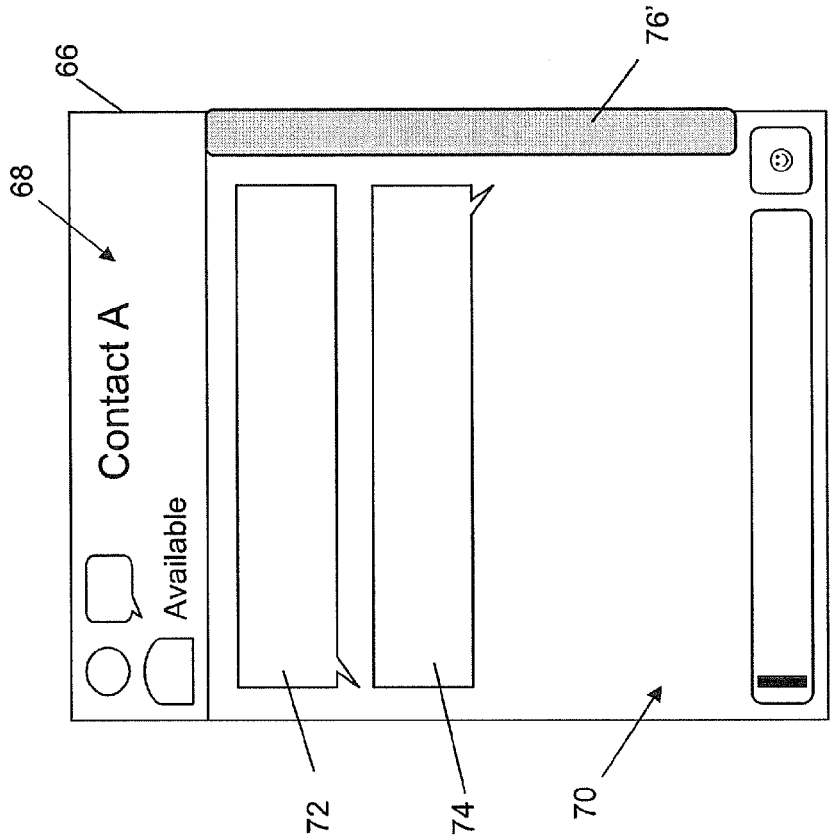

66
68
76'
Contact A
Available
72
74
70

FIG. 8

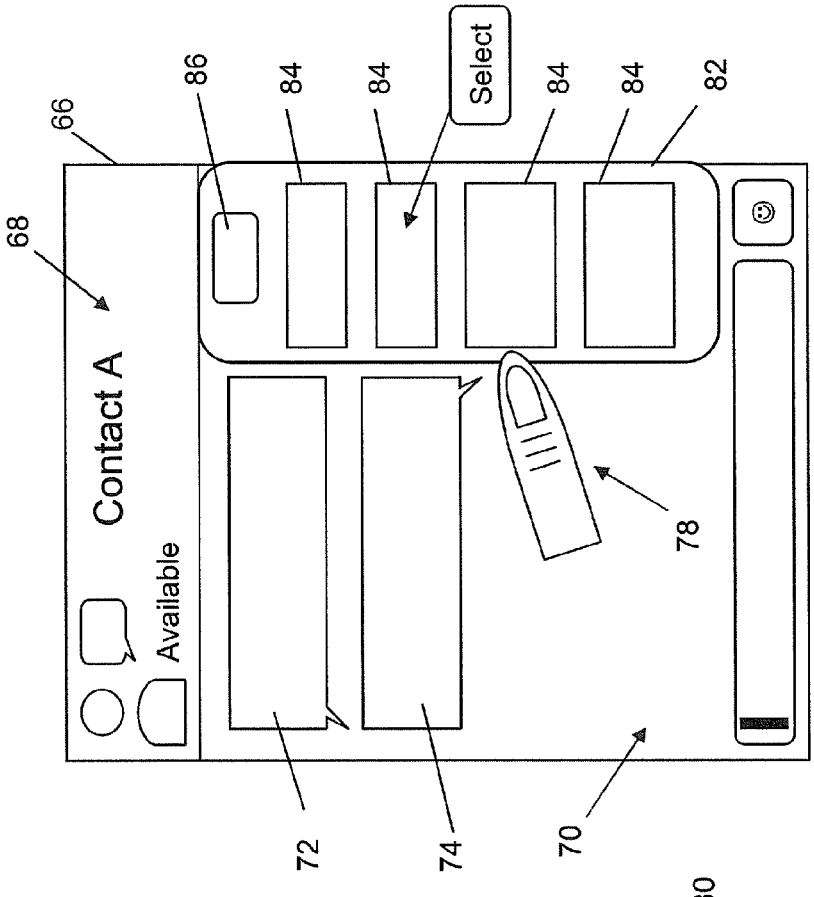

66
68
86
84
84
Select
84
84
82
Contact A
Available
78
72
74
70

FIG. 11

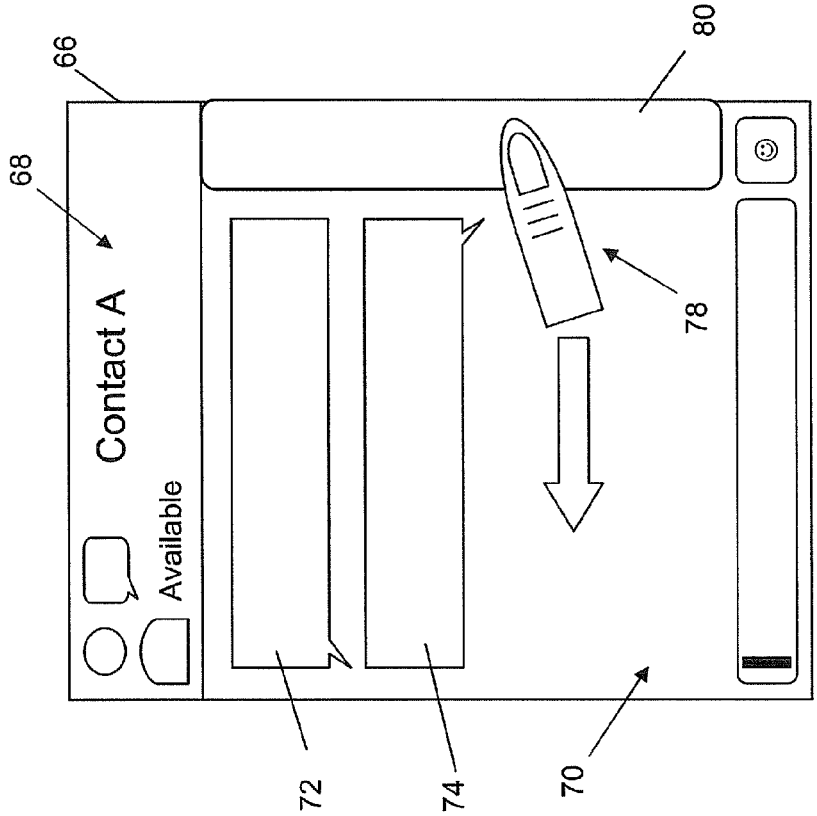

66
68
80
Contact A
Available
78
72
74
70

FIG. 10

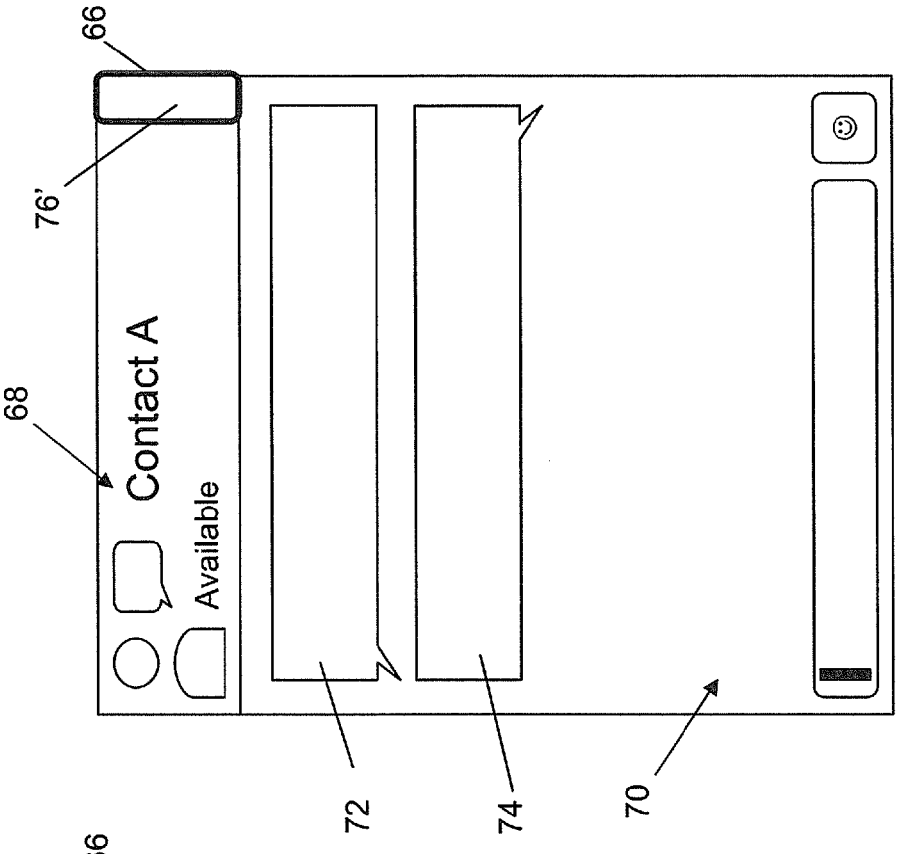

66
76'
68
Contact A
Available
72
74
70

FIG. 13

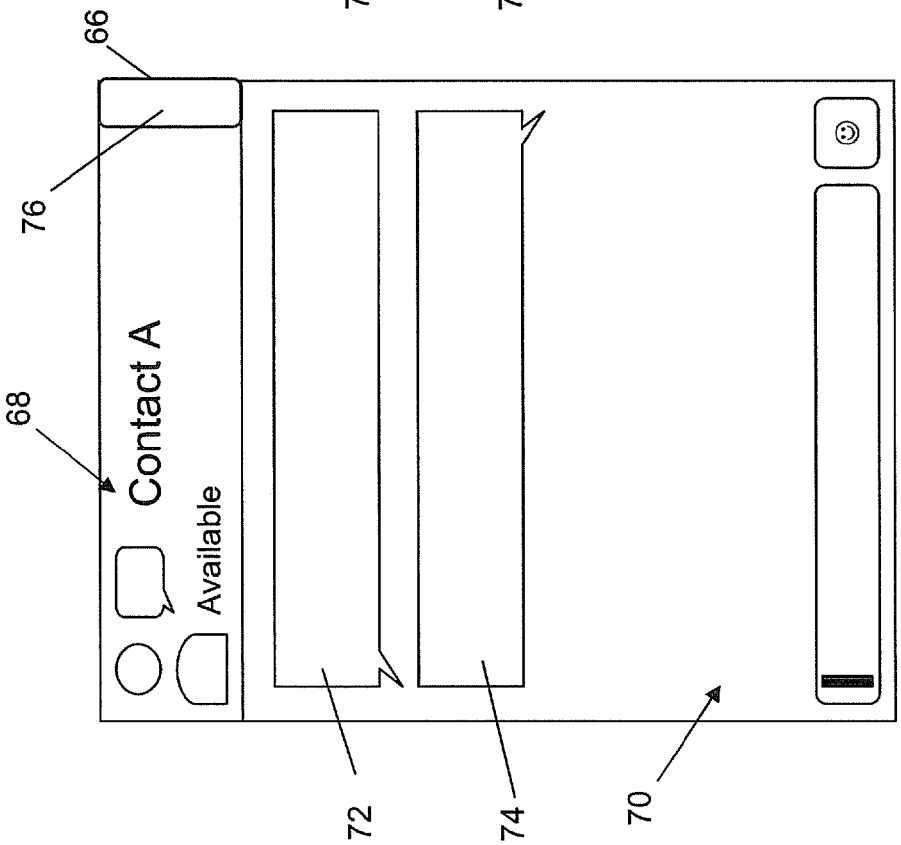

66
76
68
Contact A
Available
72
74
70

FIG. 12

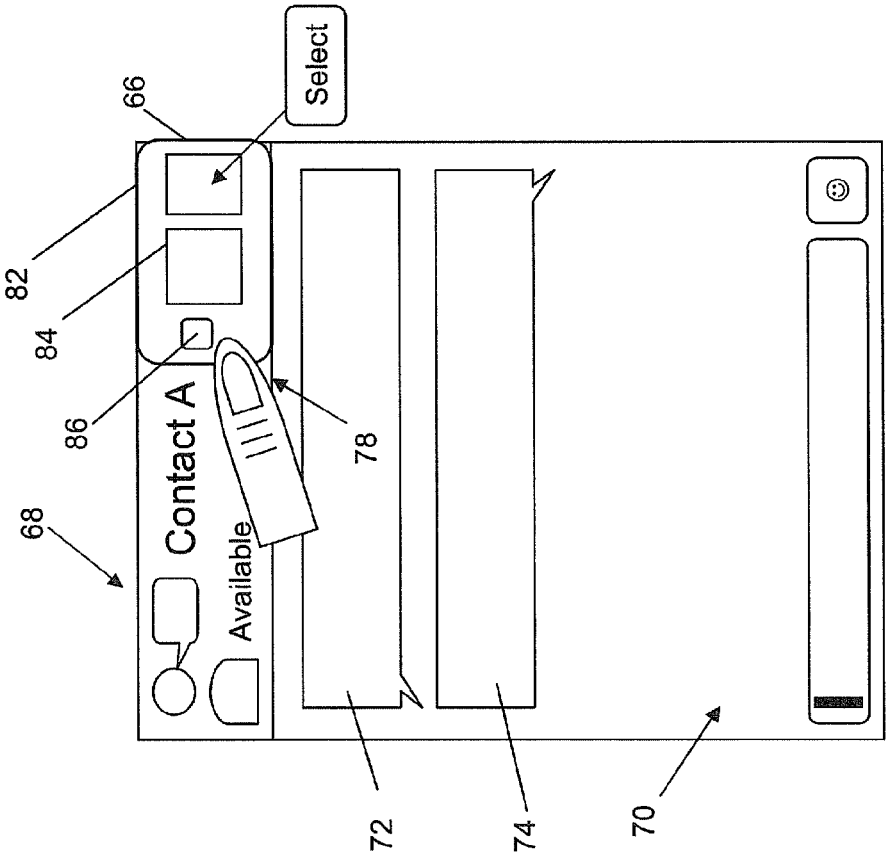

Select
66
82
84
86
Contact A
Available
68
78
72
74
70

FIG. 15

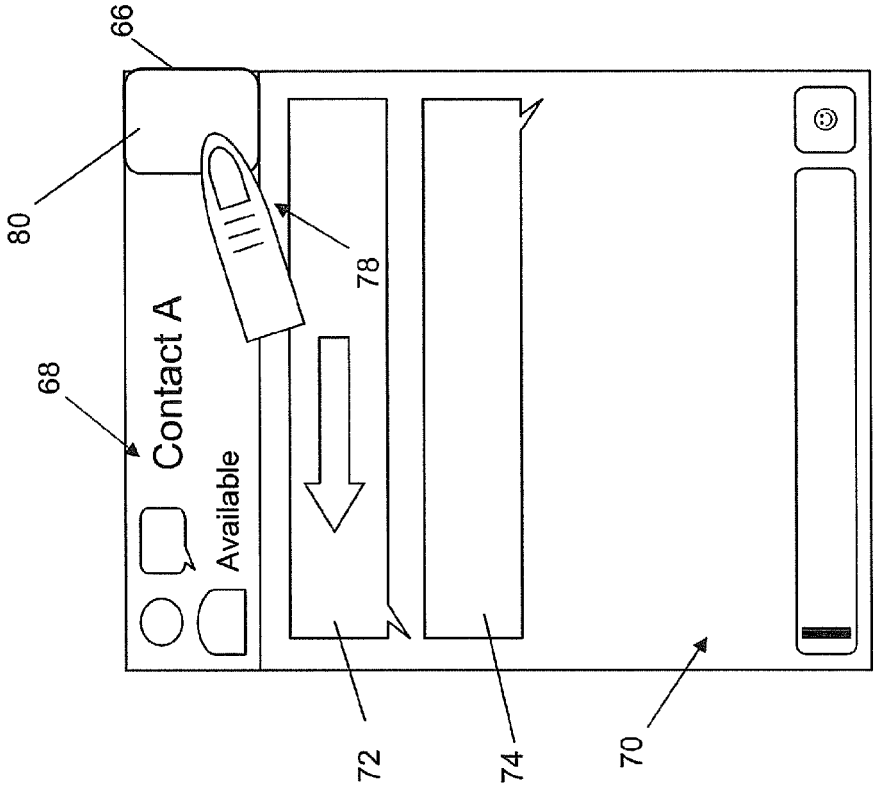

66
80
78
Contact A
Available
68
72
74
70

FIG. 14

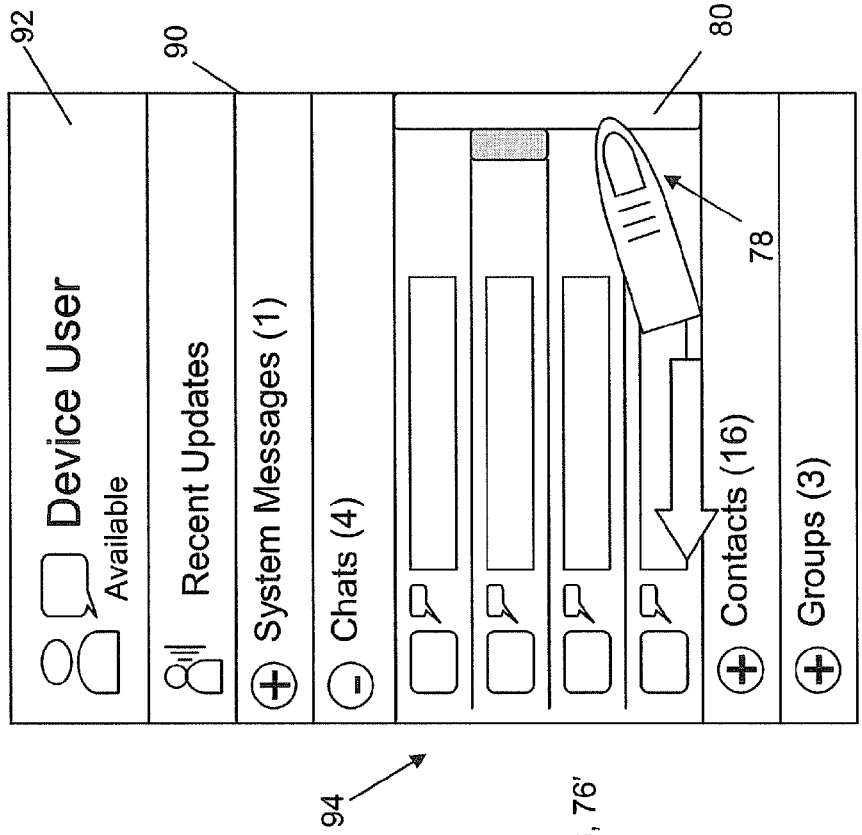

92
90
80
Device User
Available
Recent Updates
System Messages (1)
Chats (4)
Contacts (16)
Groups (3)
78
94

FIG. 17

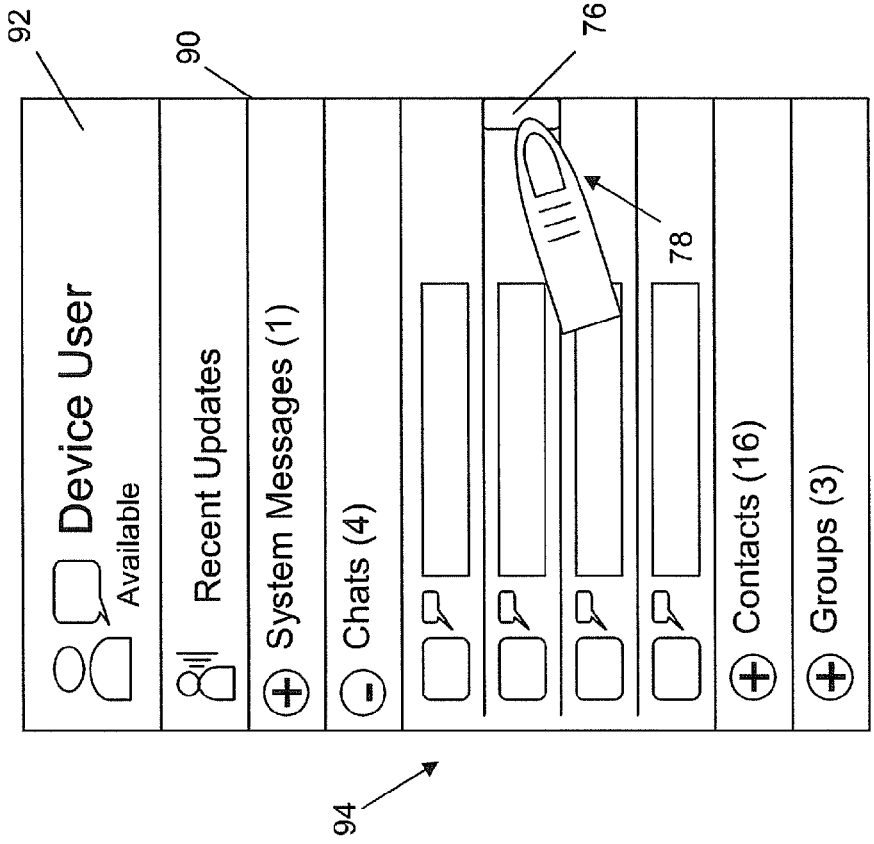

92
90
76, 76'
Device User
Available
Recent Updates
System Messages (1)
Chats (4)
Contacts (16)
Groups (3)
78
94

FIG. 16

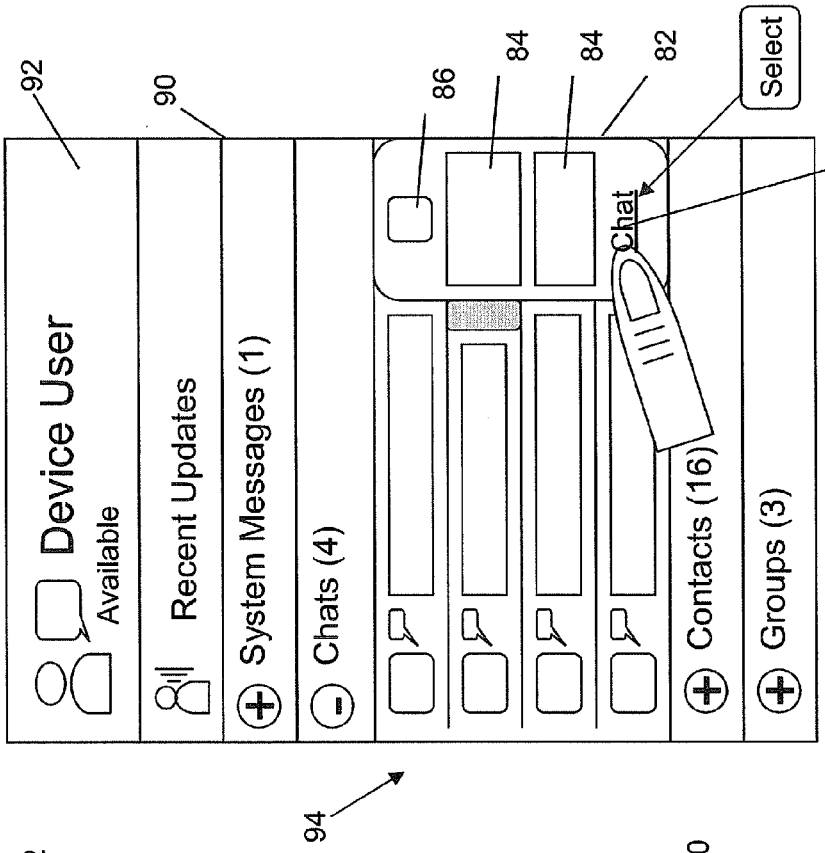

92
90
86
84
84
82
Select
96
Device User
Available
Recent Updates
System Messages (1)
Chats (4)
Chat
Contacts (16)
Groups (3)
94

FIG. 19

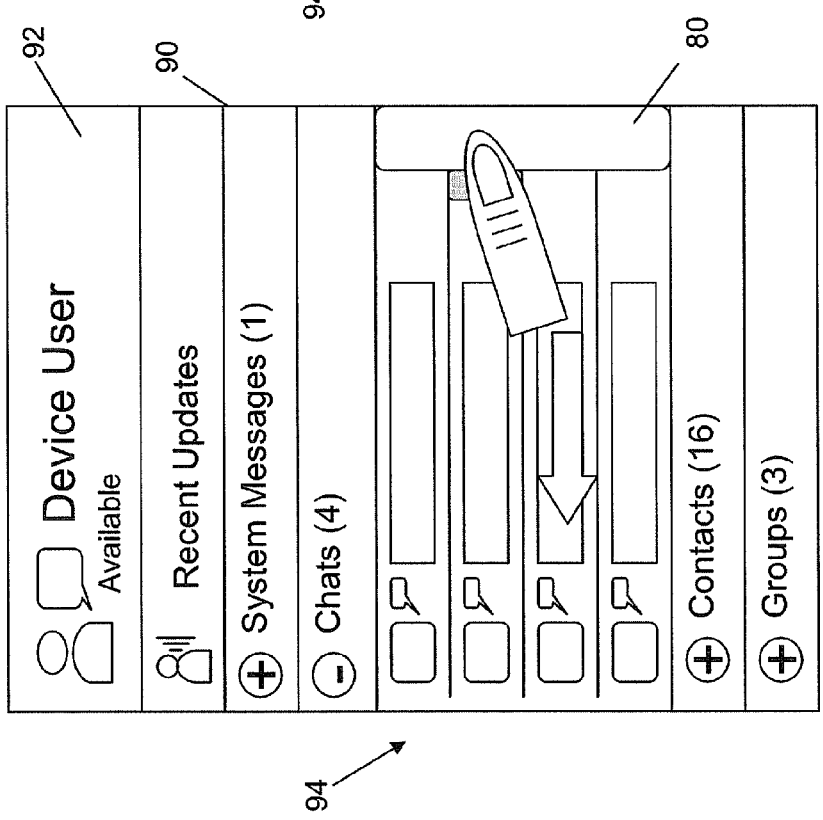

92
90
80
Device User
Available
Recent Updates
System Messages (1)
Chats (4)
Contacts (16)
Groups (3)
94

FIG. 18

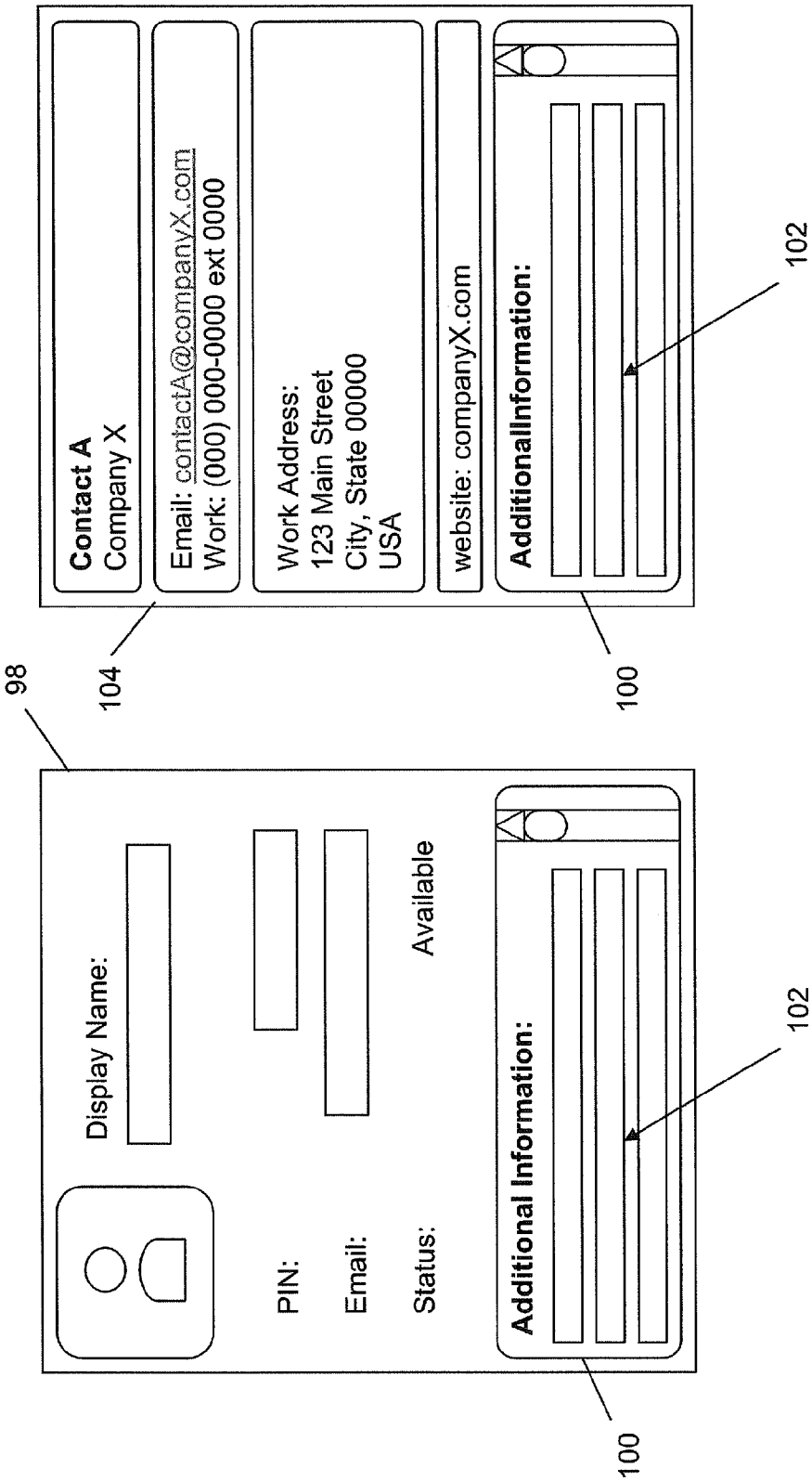

98
Display Name:
PIN:
Email:
Status:
Available
Additional Information:
100
102
104
Contact A
Company X
Email: contactA@companyX.com
Work: (000) 000-0000 ext 0000
Work Address:
123 Main Street
City, State 00000
USA
website: companyX.com
AdditionalInformation:
100
102

FIG. 20

FIG. 21

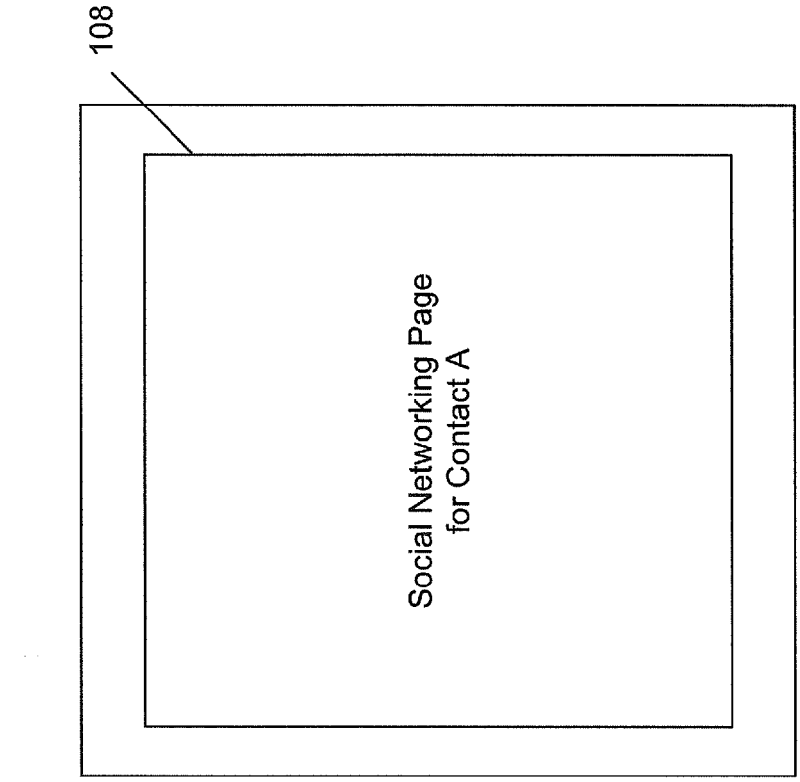

108
Social Networking Page
for Contact A

FIG. 23

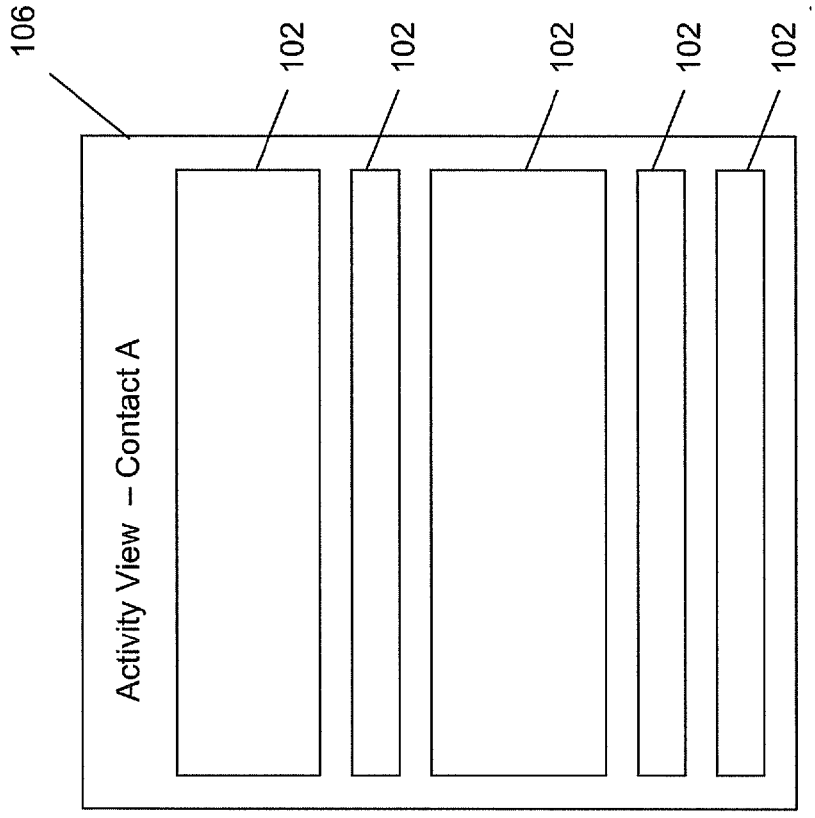

106
102
102
102
102
102
Activity View – Contact A

FIG. 22

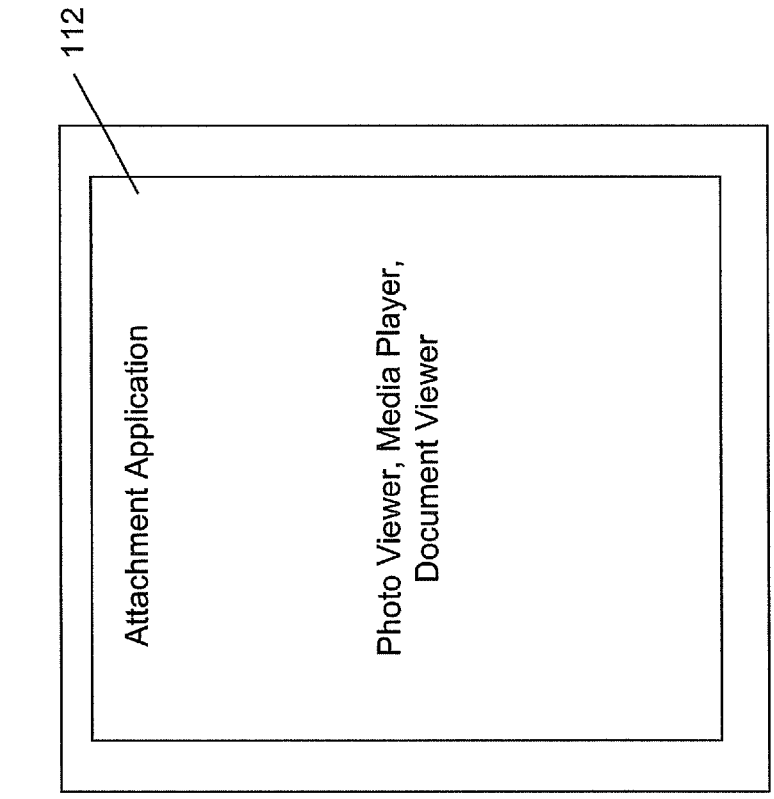

112
Attachment Application
Photo Viewer, Media Player,
Document Viewer

FIG. 25

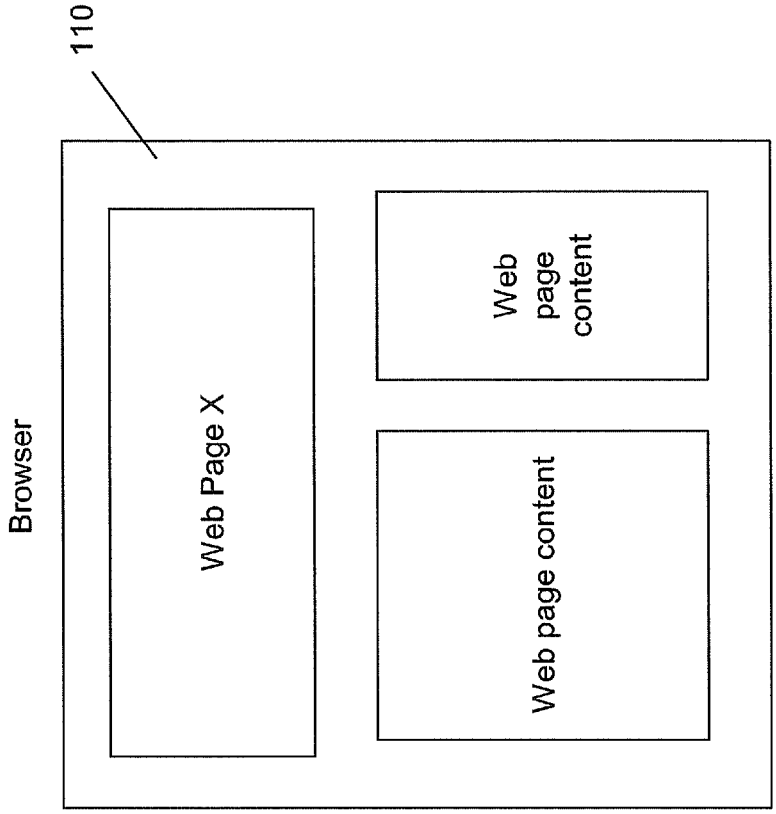

110
Browser
Web Page X
Web
page
content
Web page content

FIG. 24

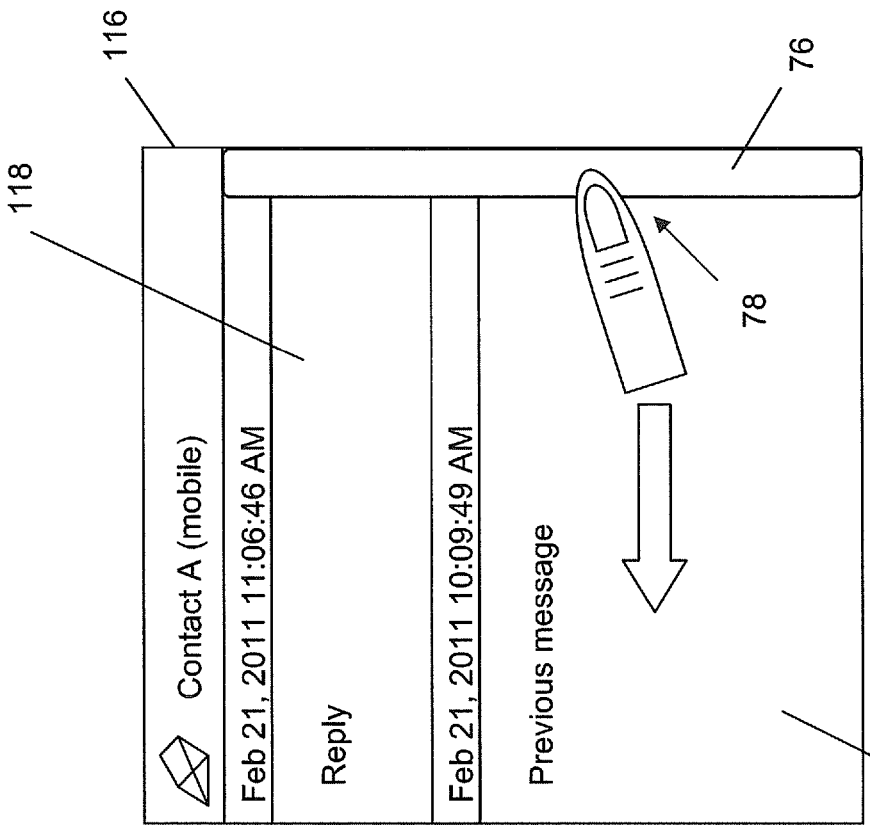

116
76
118
Contact A (mobile)
Feb 21, 2011 11:06:46 AM
Reply
Feb 21, 2011 10:09:49 AM
Previous message
78
120

FIG. 27

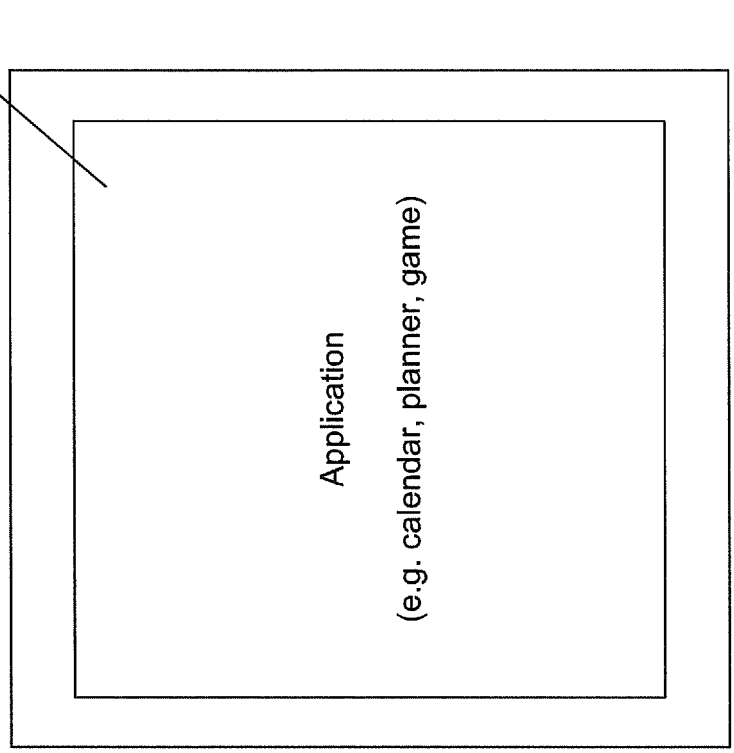

114
Application
(e.g. calendar, planner, game)

FIG. 26

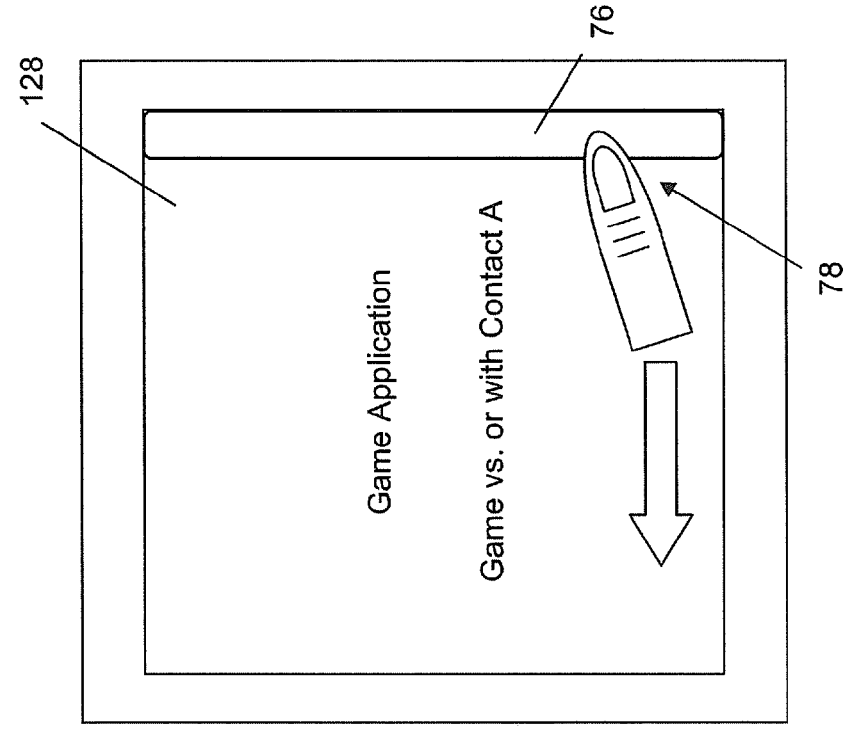

128
76
Game Application
Game vs. or with Contact A
78

FIG. 29

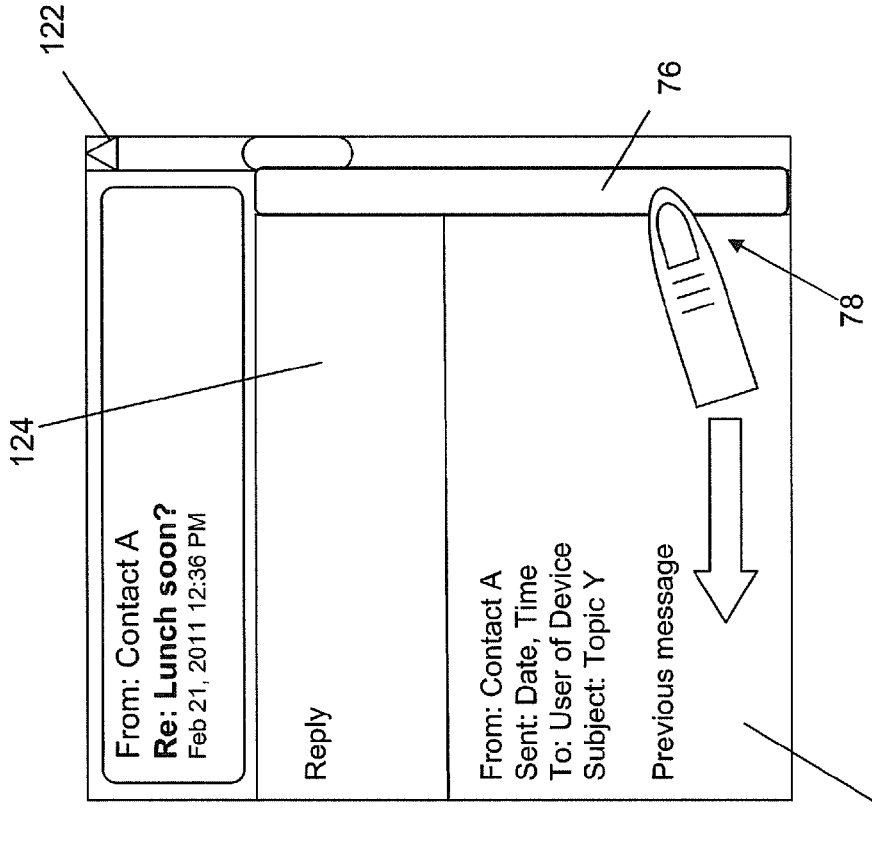

122
76
124
From: Contact A
Re: Lunch soon?
Feb 21, 2011 12:36 PM
Reply
From: Contact A
Sent: Date, Time
To: User of Device
Subject: Topic Y
Previous message
78
126

FIG. 28

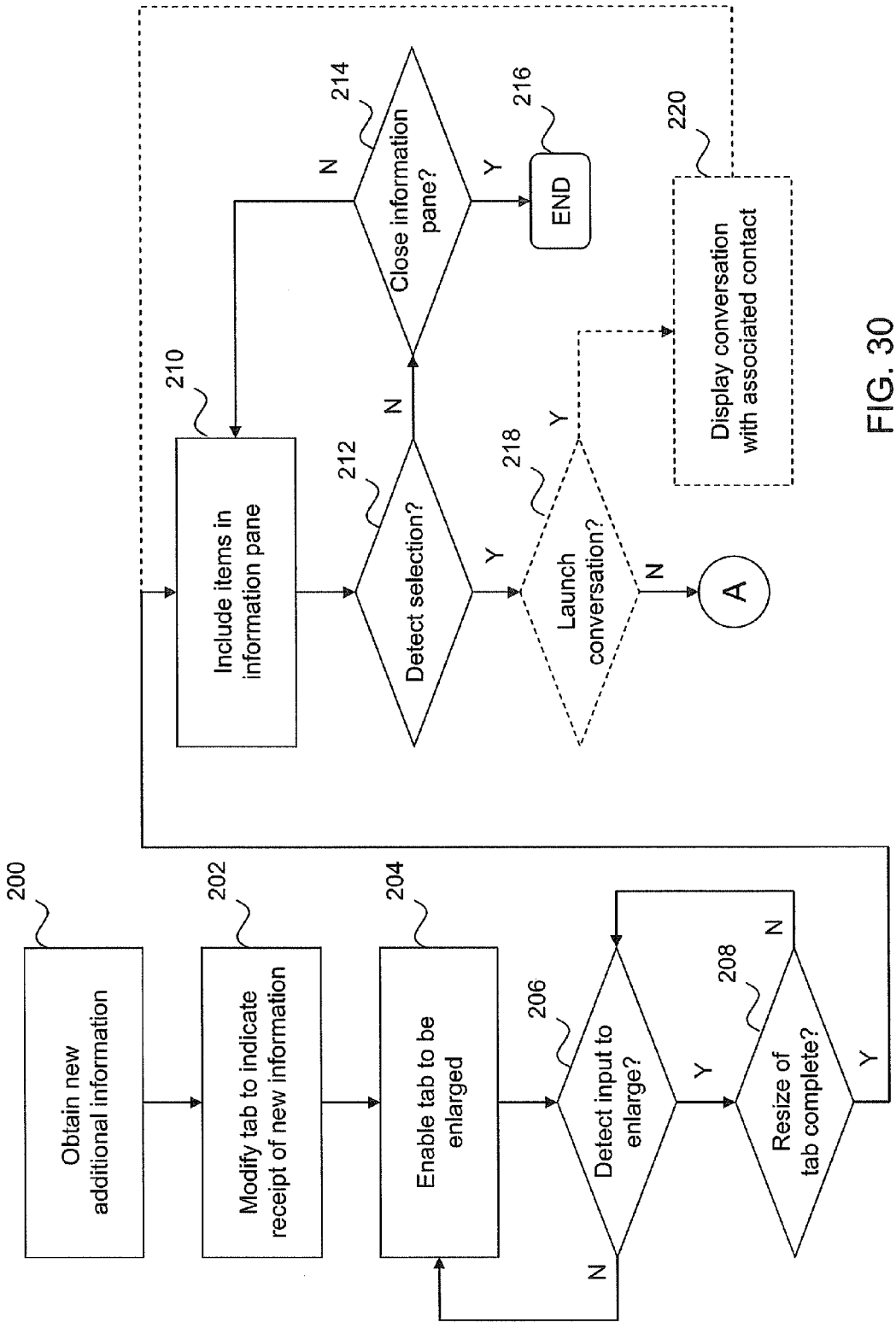

200
Obtain new additional information
202
Modify tab to indicate receipt of new information
204
Enable tab to be enlarged
206
Detect input to enlarge?
N
Y
208
Resize of tab complete?
N
Y
210
Include items in information pane
212
Detect selection?
N
Y
214
Close information pane?
N
Y
216
END
218
Launch conversation?
Y
N
220
Display conversation with associated contact
A

FIG. 30

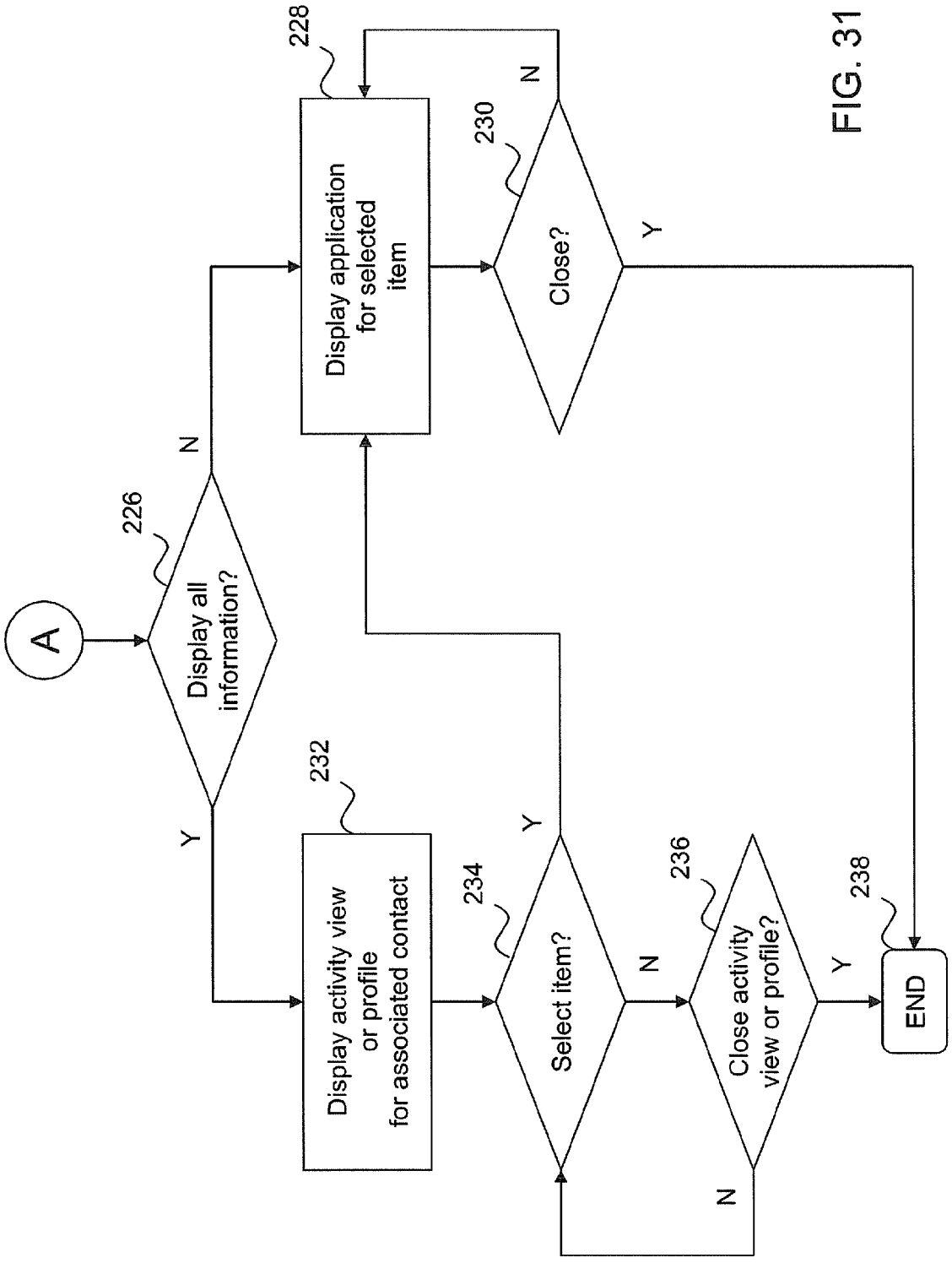

A
226
Display all information?
N
Y
228
Display application for selected item
230
Close?
N
Y
232
Display activity view or profile for associated contact
234
Select item?
Y
N
236
Close activity view or profile?
N
Y
238
END

FIG. 31

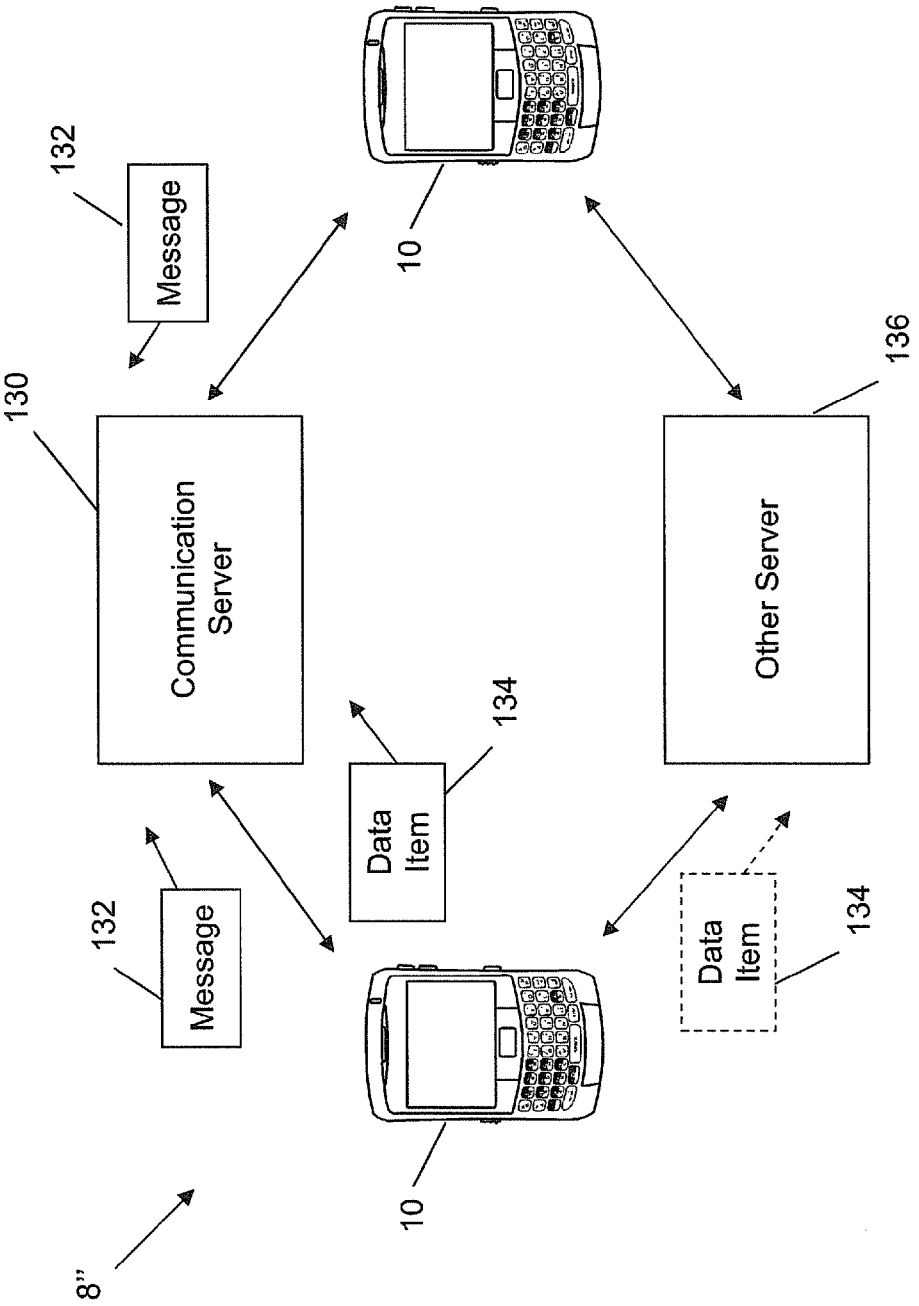

132
Message
10
130
Communication Server
136
Other Server
134
Data Item
132
Message
134
Data Item
10
8''

FIG. 32

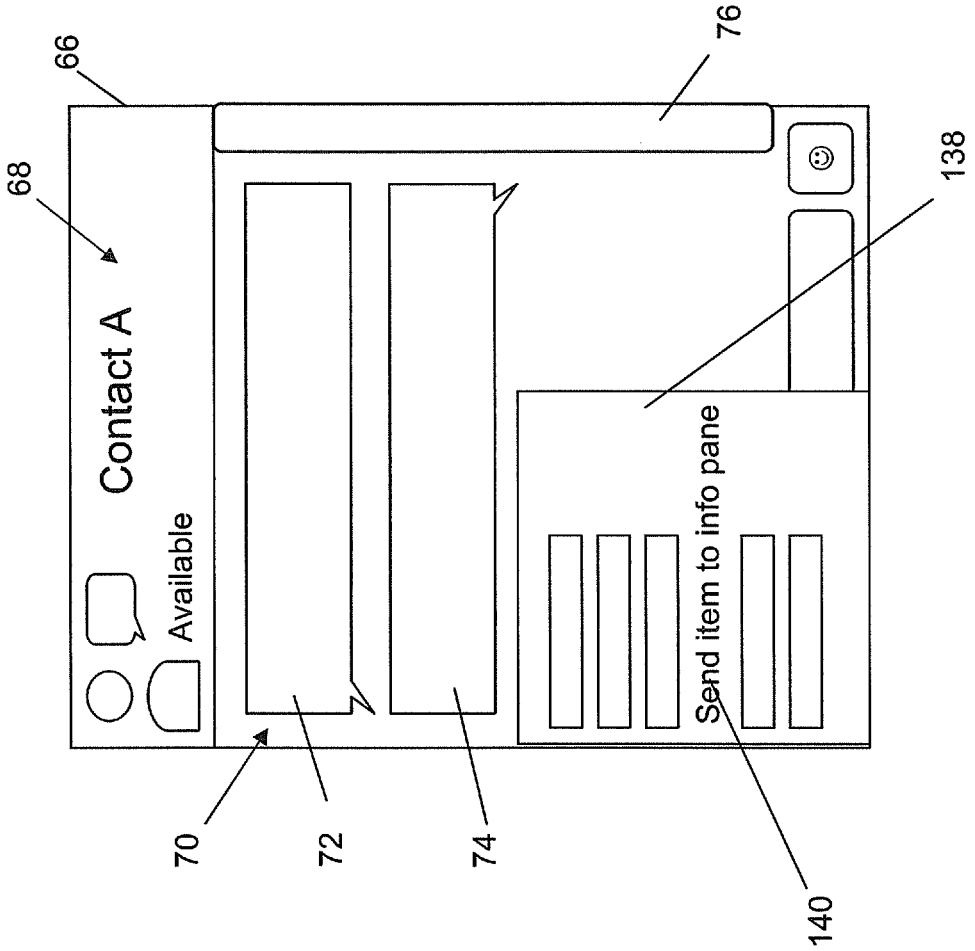

66
76
68
138
Contact A
Available
Send item to info pane
70
72
74
140

FIG. 33

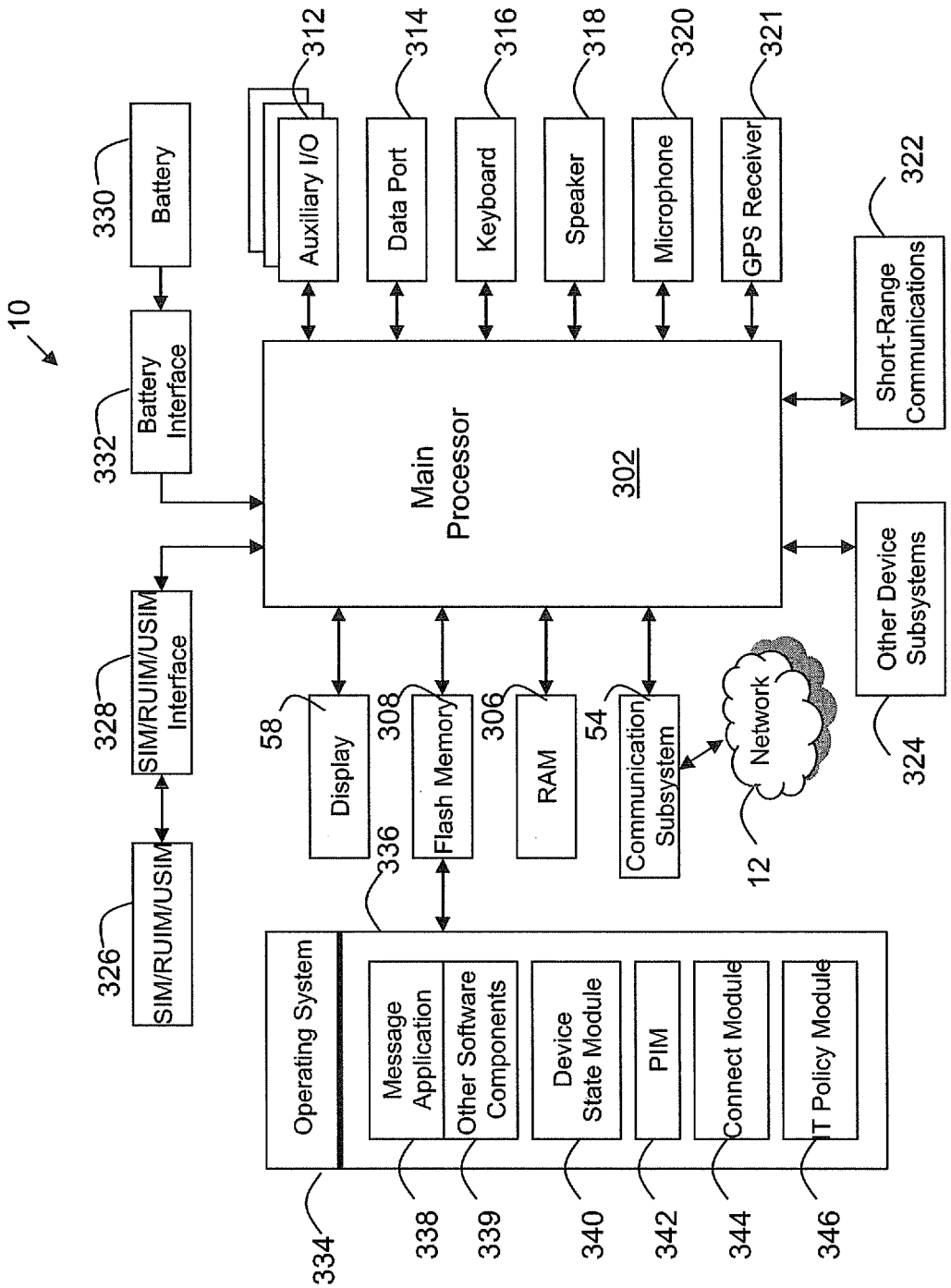

10
330
Battery
332
Battery Interface
328
SIM/RUIM/USIM Interface
326
SIM/RUIM/USIM
312
Auxiliary I/O
314
Data Port
316
Keyboard
318
Speaker
320
Microphone
321
GPS Receiver
322
Short-Range Communications
Main Processor
302
Other Device Subsystems
324
58
Display
308
Flash Memory
306
RAM
54
Communication Subsystem
Network
12
336
Operating System
Message Application
Other Software Components
Device State Module
PIM
Connect Module
T Policy Module
334
338
339
340
342
344
346

FIG. 34

SYSTEM AND METHOD FOR DISPLAYING ADDITIONAL INFORMATION ASSOCIATED WITH A MESSAGING CONTACT IN A MESSAGE EXCHANGE USER INTERFACE

TECHNICAL FIELD

The following relates generally to systems and methods for providing information associated with messaging contacts.

BACKGROUND

Mobile communication devices are often used to communicate via several different media. For example, a smart phone or personal digital assistant (PDA) having wireless communication capabilities may be used to participate in cellular telephone conversations, to exchange email, to exchange short messaging service (SMS) or multimedia messaging service (MMS) messages, to participate in instant messaging (IM or IMing) or other conversational type message exchanges, to post or receive social networking updates, receive data from web-based services, etc.

Users communicating using mobile communication devices may wish to ascertain not only the availability of their contacts, but also information that may affect those contacts. Such information may be available through services such as presence management, but in some cases, may not provide adequate context for the user.

BRIEF DESCRIPTION OF THE DRAWINGS

Embodiments will now be described by way of example only with reference to the appended drawings wherein:

FIG. **1** is a block diagram of an example wireless communication system.

FIG. **2** is a block diagram of an example wireless communication system including a peer-to-peer (P2P) system.

FIG. **3** is a block diagram of an example communication of a multi-cast P2P message via the P2P system of FIG. **1**.

FIG. **4** is a block diagram illustrating an example P2P message.

FIG. **5** is a block diagram illustrating an example configuration for a mobile device including a data tagging module.

FIG. **6** is a screen shot of an example IM conversation user interface (UI) including an information tab in a conversation portion of the UI.

FIG. **7** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **6** modified to provide a notification of new content.

FIG. **8** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **6** modified to provide a notification of new content.

FIG. **9** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **6** modified to provide a notification of new content.

FIG. **10** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **6** during a drag operation.

FIG. **11** is a screen shot of an example IM conversation UI including an information pane displayed subsequent to the drag operation illustrated in FIG. **10**.

FIG. **12** is a screen shot of an example IM conversation UI including an information tab in a banner portion of the UI.

FIG. **13** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **12** modified to provide a notification of new content.

FIG. **14** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **12** during a drag operation.

FIG. **15** is a screen shot of an example IM conversation UI including an information pane displayed subsequent to the drag operation illustrated in FIG. **14**.

FIG. **16** is a screen shot of an example IM list view UI including an information tab in association with a contact in the list view UI.

FIG. **17** is a screen shot of an example IM conversation UI including the information tab illustrated in FIG. **12** when selected to initiate a drag operation.

FIG. **18** is a screen shot of an example IM list view UI including the information tab illustrated in FIG. **17** during the drag operation.

FIG. **19** is a screen shot of an example IM list view UI including an information pane displayed subsequent to the drag operation illustrated in FIG. **18**.

FIG. **20** is a screen shot of an example IM profile UI including activity information.

FIG. **21** is a screen shot of an example contact profile UI including activity information.

FIG. **22** is a screen shot of an example activity view UI for a contact.

FIG. **23** is a screen shot of an example social networking application UI for a contact.

FIG. **24** is a screen shot of an example web browser UI.

FIG. **25** is a screen shot of an example attachment application UI.

FIG. **26** is a screen shot of an example application UI.

FIG. **27** is a screen shot of an example SMS message UI including an information tab.

FIG. **28** is a screen shot of an example email message UI including an information tab.

FIG. **29** is a screen shot of an example game application UI including an information tab.

FIG. **30** is a flow chart illustrating an example set of computer executable operations that may be performed in modifying an information tab to notify of new information, enabling the information tab to be enlarged to provide an information pane, and enabling selection of items in the information pane.

FIG. **31** is a flow chart illustrating an example set of computer executable operations that may be performed in displaying activity information upon detecting a selection in association with the information pane.

FIG. **32** is a block diagram of an example communication system enabling data items to be sent separately from communication messages.

FIG. **33** is a screen shot of an example IM conversation UI illustrating a menu including an option to send a data item to an information pane for a contact.

FIG. **34** is a block diagram of an example configuration for a mobile device.

DETAILED DESCRIPTION OF THE DRAWINGS

It will be appreciated that for simplicity and clarity of illustration, where considered appropriate, reference numerals may be repeated among the figures to indicate corresponding or analogous elements. In addition, numerous specific details are set forth in order to provide a thorough understanding of the example embodiments described herein. However, it will be understood by those of ordinary

skill in the art that the example embodiments described herein may be practised without these specific details. In other instances, well-known methods, procedures and components have not been described in detail so as not to obscure the example embodiments described herein. Also, the description is not to be considered as limiting the scope of the example embodiments described herein.

To provide context with respect to activities concerning a contact, information associated with that contact can be provided in addition to messages and other data exchanged with that contact. By providing an unobtrusive tab in a user interface (UI) used in communicating with the contact, a mechanism is available to provide a notification of new information, and to enable access to the information or a representation of the information. For example, a narrow tab may be provide along one edge of an IM conversation screen that can be dragged or "pulled" to resize the tab and display an information pane including one or more items related to a contact in the conversation.

The items provided in the information pane may also be selectable to enable further information to be displayed, e.g., an application related to or containing the selected item. For example, an update related to a social networking application may be represented in the information pane, wherein selection of the update causes the social networking application UI to be displayed. Similarly, links to content (e.g., via a web browser), invitations to join games, attachments (e.g., photos, documents, videos, etc.) and various other data items can also be associated with items in the information pane in order to enable further content and information to be launched through selection of an item in the information pane. Moreover, the information pane can be used as an alternative communication channel and portal for sending and receiving data items such as links, pictures, or other attachments to enable sharing between contacts without disrupting or cluttering a conversational exchange or consuming resources in a particular communication medium.

Although the principles discussed below are applicable to any electronic communication device, examples will be provided for a mobile communication device, which is one of many types of electronic communication devices.

For clarity in the discussion below, mobile communication devices may be commonly referred to as "mobile devices" for brevity. Examples of applicable mobile devices may include, without limitation, cellular phones, smartphones, wireless organizers, pagers, personal digital assistants, laptops, handheld or other wireless communication devices, wirelessly enabled notebook computers, portable gaming devices, tablet computers, or any other portable electronic device with processing and communication capabilities.

Turning to FIG. **1**, an example communication system **8** is shown. The communication system **8**, in this example, enables, at least in part, mobile devices **10** to communicate with each other via a wireless network **12**. For example, as shown, data **14** may be exchanged between various mobile devices **10**. Data **14** that is sent from one mobile device **10** to another mobile device **10** may be transmitted according to a particular messaging or communication medium, protocol, or other mechanism. For example, as shown in FIG. **1**, data **14** may be sent over the wireless network **12** via a component of a network infrastructure **16**. It can be appreciated that the network infrastructure **16** shown in FIG. **1** is illustrative only and any component shown within the dashed lines may also or instead be operated by or within another infrastructure or entity. In this example, the network infrastructure **16** includes various example systems that may be used by the mobile devices **10** to exchange data **14**. The non-exhaustive list of examples shown in FIG. **1** includes a peer-to-peer (P2P) system **18** (e.g., IM system), a short message service centre **20** (SMSC), an email system **22** (e.g., web-based, enterprise based, or otherwise), a web system **24** (e.g., hosting a website or web service), a host system **26** (e.g., enterprise server), and a social networking system **28**.

The mobile devices **10** may therefore send data to or receive data from other mobile devices **10** via one of the example systems with which the mobile devices **10** are communicable via the wireless network **12** and network infrastructure **16**. A mobile device **10** and its corresponding user(s) may be designated by another mobile device **10** as a contact. As will be discussed in greater detail below, mobile devices **10** may store information associated with various contacts in order to facilitate communicating with that contact via at least one medium. For example, a contact may be reachable via any combination of telephone, email, IM, SMS, and social networking applications. A contact profile **53** (see also FIG. **5**) can be stored for that contact to enable the mobile device **10** to conveniently communicate with the contact over a desired medium without having to necessarily enter contact information (e.g., addresses) each and every time they wish to communicate with that contact. In addition to information enabling the mobile device **10** to communicate with the contact, a contact profile **53** can include additional information and data such as an avatar, physical (mailing) address, personal information, professional information, etc. As discussed above, in order to provide context with respect to activities concerning a contact, information associated with that contact can be provided in addition to messages and other data exchanged with that contact. By providing an unobtrusive tab in a user interface (UI) used in communicating with the contact, a mechanism is available to provide a notification of new information, and to enable access to the information or a representation of the information.

An example embodiment of a communication system **8'** including a wireless infrastructure **16'**, is shown in FIG. **2**. The communication system **8'** at least in part, enables mobile devices **10** to communicate via a P2P system **18** over the wireless network **12**. It will be appreciated that the mobile devices **10** shown in FIG. **2** are for illustrative purposes only and many other mobile devices **10** (not shown) may also be capable of communicating with or within the communication system **8'**. It will also be appreciated that although the examples shown herein are directed to mobile communication devices, the same principles may apply to other devices capable of communicating with the P2P system **18**. For example, an application (not shown) hosted by a desktop computer or other "non-portable" or "non-mobile" device may also be capable of communicating with other devices (e.g., including mobile devices **10**) using the P2P system **18**.

The P2P system **18** is, in this example, a component of the wireless infrastructure **16'** associated with the wireless network **12**. The wireless infrastructure **16'** in this example includes, in addition to the P2P system **18**, and among other things not shown for simplicity, a person identification number (PIN) database **30**. The PIN database **30** in this example is used to store one or more PINs associated with particular mobile devices **10**, whether they are subscribers to a service provided by the wireless infrastructure **16'** or otherwise.

One of the mobile devices **10** may communicate with the other of the mobile devices **10** and vice versa via the P2P system **18**, in order to perform P2P messaging or to otherwise exchange P2P-based communications. For ease of

explanation, in the following examples, any P2P-based communication may also be referred to as a P2P message **32** as shown in FIG. **2**.

In some examples, the P2P system **18** may be capable of sending multi-cast messages, i.e. forwarding a single message from a sender to multiple recipients without requiring multiple messages **32** to be generated by such sender. For example, as shown in FIG. **3**, the P2P system **18** can be operable to enable a single P2P message **32** to be sent to multiple recipients by addressing the P2P message **32** to multiple corresponding P2P addresses, and having the P2P system **18** multicast the message **32** to those recipients.

An example P2P message **32** is shown in greater detail in FIG. **4**, and has a format that is particularly suitable for a PIN-to-PIN based system. In a typical P2P protocol, each P2P message **32** has associated therewith a source corresponding to the mobile device **10** which has sent the P2P message **32** and includes a destination identifying the one or more intended recipients. Each P2P message **32** in this example includes a body **34**, which contains the content for the P2P message **32** (e.g., text or other data), and a header **36**, which contains various fields used for transmitting and processing each P2P message **32**. In this example, the header **36** includes a message type field **38** to specify the type of transmission (e.g., chat, registration, block, presence, etc.), a source field **40** to specify the device address for the sender, a destination field **42** to specify the device address(es) for the one or more intended recipients, an ID field **44** to identify the corresponding P2P application (e.g., see IM application **61** in FIG. **5**) and a timestamp field **46** to indicate the time (and if desired, the date) at which the P2P message **32** was sent by the designated sender.

It can be appreciated that in this example, the ID field **44** can be used to specify the application ID to identify a P2P application on the mobile device **10**. Where the P2P application relates to, for example, an IM system, the message type field **38** can also be used to designate an IM communication, and the ID field **44** may then correspond to a conversation ID, i.e. a conversation thread the message **32** corresponds to (e.g., such that each message **32** is identified by the conversation in which it was sent).

It will be appreciated that other information or attributes may be included in the P2P message **32**, such as a subject field (not shown) to enable a subject for part or all of a conversation (in an IM embodiment) to be transported with the P2P message **32** (e.g., to create new subjects, modify subjects, notify others of subjects, etc.), or application details field (not shown) to provide application-specific information such as the version and capabilities of the application.

The P2P system **18** can utilize any suitable P2P protocol operated by, for example, a P2P router (not shown), which may be part of the wireless infrastructure **16'**. It can be appreciated however that a stand-alone P2P configuration (i.e. that does not rely on the wireless infrastructure **16'**—not shown) may equally apply the principles herein. The P2P system **18** may also enable mobile devices **10** to communicate with desktop computers thus facilitating, for example, communications such as instant messaging (IM) between mobile applications and desktop applications on the desktop computer.

The P2P system **18** can be implemented using a router-based communication infrastructure, such as one that provides email, SMS, voice, Internet and other communications. Particularly suitable for hosting a P2P messaging router, is a wireless router or server used in systems such as those that provide push-based communication services. In FIG. **2**, the wireless infrastructure **16'** facilitates P2P communications such as instant messaging between mobile devices **10**. P2P messaging, such as IMing, is provided by an associated application stored on each mobile device **10**, e.g., an IM application **61** as shown in FIG. **5**, which can be initiated, for example, by highlighting and selecting an icon from a display as is well known in the art. The P2P system **18** routes messages between the mobile devices **10** according to the P2P protocol being used. For example, the P2P protocol may define a particular way in which to conduct IM or other types of messaging.

In general, in a P2P protocol, the sender of the P2P message **32** knows the source address of the intended recipient, e.g., a PIN. Knowledge of the source address may be established when the two devices request to add each other to their respective contact or buddy lists. A particular mobile device **10** can communicate directly with various other mobile devices **10** through the P2P system **18** without requiring a dedicated server for facilitating communications. In other words, the P2P system **18** enables the mobile devices **10** to communicate with each other directly over the wireless infrastructure **16'** in accordance with the P2P protocol.

When conducting a P2P session according to the example shown in FIG. **2**, the mobile devices **10** can communicate directly with the wireless infrastructure **16'** in a client based exchange where, as noted above, an intermediate server is not required. A P2P message **32** sent by one mobile device **10** is received by the wireless infrastructure **16'**, which obtains the source address for the intended recipient (or recipients) from information associated with the message **32** (e.g., a data log) or from the message **32** itself. Upon obtaining the recipient's address according to the P2P protocol, the wireless infrastructure **16'** then routes the message **32** to the recipient associated with the mobile device **10** having such address (or recipients having respective addresses). The wireless infrastructure **16'** typically also provides a delivery confirmation to the original sender, which may or may not be displayed to the user. The destination device can also provide such delivery information. The wireless infrastructure **16'** may be capable of routing P2P messages **32** reliably as well as being capable of holding onto the P2P messages **32** until they are successfully delivered. Alternatively, if delivery cannot be made after a certain timeout period, the wireless infrastructure **16'** may provide a response indicating a failed delivery. The wireless infrastructure **16'** may choose to expire or delete a message **32** if a certain waiting period lapses.

Turning now to FIG. **5**, an example configuration for a mobile device **10** is shown. In this example, a communication subsystem **54** is provided in order to enable the mobile device **10** to access communication networks such as the wireless network **12** shown in FIGS. **1** and **2**. Various applications are illustrated in FIG. **5**, and such applications may be operable on the mobile device **10** to access the communication subsystem **54** in order to participate in sending and/or receiving data **14**, such as in a data communication. It can be appreciated that the example applications shown in FIG. **5** are for illustrative purposes only and should not be considered exhaustive. The example applications shown in FIG. **5** include a calendar application **60**, an IM application **61**, an SMS application **62**, an email application **63**, a social networking application **64**, and a game application **65**. The applications **60-65** may also access a UI module **56** for providing UI data on a display of the mobile device **10** using a display module **58**.

To exchange information in addition to that exchanged in communications using the applications **60-65**, a tab **76** (see also FIG. **6**) may be provided in a UI for the application **60-65**. Such additional information **55** can be represented by one or more items **84** provided in an information pane **82** (see also FIG. **11**) accessible by selecting and enlarging the tab **76**. In the example embodiment shown in FIG. **5**, an information pane module **52** is provided, which can be used to obtain and store additional information **55** received from or on behalf of a contact, and obtain and send additional information **55** related to a user of the mobile device **10**. As will be shown by way of example below, the additional information **55** represented by items **84** in the information pane **82** may be made available in various ways, such as by incorporating the additional information **55** in a contact profile **53** for the associated contact. It can be appreciated that the contact profiles database **53** shown in FIG. **5** may contain general profiles (e.g., for a contacts application), specific profiles (e.g., IM profiles), or both. It can also be appreciated that the information pane module **52** may be operable to obtain the additional information **55** from the applications **60-65** themselves and from other sources on or available to the mobile device **10**.

The additional information **55** can include any event, update, or related information that provides context regarding the activities, status, state, location, environment, etc. of a particular contact. For example, the additional information **55** can include, relate to, or represent a social networking update, provide a link or advertisement associated with information the contact is currently viewing, browsing, or listening to on their mobile device **10**, provide location based information such as weather and news, provide photos, videos, documents or other attachments sent by the contact, etc. As such, it can be appreciated that the information pane **82** can be used to provide various items that represent or contain various types of additional information **55** related to the contact with which the user is communicating.

FIG. **6** illustrates an example message exchange UI, which is an IM conversation UI **66** having existing content, including a banner portion **68** and a conversation history portion **70**. The conversation history portion **70** includes, in this example, an outgoing message **72** to, and an incoming message **74** from, Contact A. The conversation history portion **70** includes or is adjacent to an information tab **76**. It can be seen in FIG. **6** that the information tab **76** is displayed in such a way that it does not obstruct or degrade from the display space made available to the other components of the IM conversation UI **66**, the conversation history portion **70** in particular, in this example. It can be appreciated that the information tab **76** may also be displayed in other locations within the IM conversation UI **66** and FIG. **6** provides only one illustrative example. For example, the information tab **76** may instead be along the left, top, or bottom edge of the conversation history portion **70** or, as illustrated below, be incorporated in the banner portion **68**.

To provide a notification of new information items **84** associated with Contact A, the information tab **76** can be visually modified or have a distinguishable alert associated with receipt of the new items (e.g., an audible tone, flashing light, vibration, etc.). It can also be appreciated that the information tab **76** can be concealed or otherwise "made invisible" until receipt of new additional information **55** for Contact A, and therefore the presence of the information tab **76** in the IM conversation UI **66** may itself provide notification of the receipt of new additional information **55**.

FIG. **7** illustrates an example wherein a modified information tab **76'** is displayed to indicate the receipt of new additional information **55**. In the example embodiment shown in FIG. **7**, the modified information tab **76'** includes a darkened border to distinguish the modified information tab **76'** from the regular information tab **76**. The modified information tab **76'** can replace a regular information tab **76** for a predetermined amount of time before reverting to the regular information tab **76**, or may persist until an input is detected (e.g., selection of the highlighted information tab **76'**). It can be appreciated that in examples wherein the information tab **76** is displayed only when new additional information **55** is obtained, the information tab **76** may similarly be displayed for a predetermined amount of time, or persist until detecting an input.

FIG. **8** illustrates an example wherein the modified information tab **76'** comprises a different color than the regular information tab **76**. FIG. **9** illustrates an example embodiment wherein the modified information tab **76'** comprises a movement (e.g., a "wiggle" or other animation) of the regular information tab **76** (as illustrated in FIG. **9** using the movement lines). In the example shown in FIG. **9**, it can be appreciated that such movement can be performed for a predetermined amount of time before reverting to the regular information tab **76** or to another version of the modified information tab **76'** (e.g., to include a darkened border, shading, etc.).

Turning now to FIGS. **10** and **11**, an example illustrating an enlargement of the information tab **76** to reveal the information pane **82** is shown. Enlarging the information tab **76** can enable access to data items **84** associated with the new additional information **55**. In this example embodiment, a "touch and drag" operation **78** is used to simulate "pulling" the information tab **76** away from the edge of the screen to reveal the information pane **82**. FIG. **10** illustrates an intermediate tab **80**, which gradually enlarges as the drag operation continues until the intermediate tab **80** becomes a predetermined size, at which time the information pane **82** locks into place and displays the various items **84** related to Contact A. It can be seen in FIGS. **10** and **11** that the enlargement of the information tab **76** and the intermediate tab **80** can coincide with a resizing of the conversation history portion **70** of the IM conversation UI **66**, in order to not disrupt or conceal the messages **72**, **74**. In this way, the information pane **82** can not only be used to quickly view the items **84** while exchanging messages with Contact A, but the information pane **82** can be kept in view during the conversation to stimulate conversation and provide ongoing context with respect to Contact A. Moreover, by maintaining the information pane **82** alongside the IM conversation history portion **70** as shown in FIG. **11**, new additional information **55** can be continually updated as the new additional information **55** becomes available. Alternatively, upon enlarging the information tab **76**, the information pane **82** may overlap at least part of the conversation history portion **70**, temporarily obstructing viewing of the conversation history portion **70**.

As shown in the example of FIG. **11**, a selectable option **86** may also be displayed in the information pane **82** to initiate the display of a profile or other separate screen which contains the additional information **55** represented by the items **84**. In this way, selection of the option **86** enables all additional information **55** to be displayed whereas selection of an individual item **84** enables a portion of the additional information **55** to be provided, e.g., separately, using another application, or otherwise. For example, an item **84** may be used to indicate the nature of a social networking update

wherein selection of the update itself launches a UI for the social networking application **64**. The option **86** may be used to display a customized application that is used to display the additional information **55** or to launch a contact profile **53** or other screen or UI related to the associated contact, the contact profile **53** or other screen or UI including or providing access to the additional information **55**.

As will be discussed further below, the information pane **82** can also provide a parallel portal for sending and receiving the additional information **55**, e.g., during a conversation. For example, a thumbnail of a picture may be displayed as one of the items **84** in the information pane **82**, whereupon selection of the thumbnail initiates a transfer of the picture to the mobile device **10**. It can be appreciated that such transfers can be initiated both manually by the users and automatically by the mobile devices **10**. For example, the information pane module **52** can be operable to detect content being viewed using a browser application and automatically forward a representative image, a link, or any portion of content being viewed to provide context with respect to how the user is currently engaged with the mobile device **10**. In this way, the additional information **55** can provide an indication of what may be of interest to a contact or stimulate further conversation.

FIGS. **12** to **15** illustrate another example, wherein the information tab **76** and information pane **82** are displayed in the banner portion **68** of the IM conversation UI **66**. As illustrated in FIG. **13**, a modified information tab **76'** may be used to provide notification of new additional information **55**, and as illustrated in FIG. **14**, selecting and dragging the information tab **76** can initiate display of an intermediate tab **80** prior to revealing the information pane **82** in the banner portion **68**. It can be appreciated that, similar to the example embodiment shown in FIGS. **7** to **11**, the contents of the banner portion **68** may be resized and shifted such that the information pane **82** does not obstruct such contents (e.g., contact name, availability information, etc.), or the information pane **82** may temporarily overlap an area of the banner portion **68**. In the example shown in FIG. **15**, it can be seen that a selectable option **86** can be provided, similar to the embodiment shown in FIGS. **7** to **11** for initiating the display of a separate screen including the additional information **55**. Similarly, a number of items **84** representing portions of the additional information **55** can also be displayed in a banner-situated information pane **82** and selection of a particular item **84** can initiate the display of the additional information **55** represented by the item **84** and/or an application UI including or associated with the item **84** and additional information **55**.

Turning now to FIGS. **16** to **19**, in another example, one or more information tabs **76** may be displayed in an IM list view UI **90** to enable additional information **55** associated with any one of a plurality of contacts to be made available in a single location. In the example shown, the IM list view UI **90** includes a banner portion **92** related to the user of the mobile device **10** and, among other things, a list of chats **94** associated with various contacts. As shown in FIG. **16**, when new additional information **55** is received for a particular contact, a notification of the new additional information **55** can be provided in association with the particular contact, e.g., by displaying a partial information tab **76** adjacent a contact list item, or displaying a modified information tab **76'** to distinguish that information tab **76'** from others that may also be displayed at the same time. By selecting the information tab **76** or modified information tab **76'**, a larger intermediate tab **80** can be displayed to provide a larger area for dragging to reveal the information pane **82** as shown in FIGS. **18** and **19**. Similar to the examples above, a selectable option **86** can be provided to enable a separate screen including all or at least a number of portions of the additional information **55** to be displayed, in addition to a number of items **84** representing portions of the additional information **55** being displayed. Also shown in FIG. **19** is a Chat option **96** or link that may be selected in order to navigate into a chat with the particular contact (e.g., as shown in FIGS. **6** to **15**). In this way, the contextual or otherwise relevant additional information **55** can lend itself to initiating new conversations or resuming idle conversations by providing an item **84** that sparks an interest in the contact. It can be appreciated that when displaying the IM conversation UI **66** after detecting selection of the Chat option **96**, either the information tab **76** or the information pane **82** can be displayed along with the new or existing chat with the contact. It can also be appreciated that similar to the above-described examples, the list of chats **94** can be resized as the information tab **76** is enlarged from an intermediate tab **80** to the information pane **82** so as to not obstruct the information provided in each list item.

As discussed above, selection of, for example, the selectable option **86**, invokes a separate screen including the addition information **55** to be displayed to provide access to at least a plurality of the items **84**. FIG. **20** illustrates an IM profile UI **98** which includes, in addition to IM related information for the associated contact, an additional information portion **100** which includes information items **102** listed or otherwise provided therein. It can be appreciated that the portion **100** can be scrollable as shown or utilize various other mechanisms to enable the additional information **55** to be displayed in a convenient manner. FIG. **21** illustrates a contact profile UI **104** for Contact A that may also be configured to display an additional information portion **100** including information items **102**. FIG. **22** illustrates an example activity view UI **106** for Contact A, which provides a customized UI for displaying the additional information items **102**. It can be appreciated that the activity view UI **106** can generally represent any application UI or other UI that has been customized or is otherwise configured to display the additional information **55**.

FIG. **23** illustrates a social networking page UI **108** for Contact A, which may be displayed upon detecting selection of an item **84** from the information pane **82**, an information item **102** from an activity view UI **106** or profile UI **98**, **104**, the selectable option **86** (e.g., if all items **84** are related to the same application type), etc. The items **84**, **102** may represent a larger set of additional information **55** (e.g., thumbnail of an image, icon representing a social networking update, etc.), or may provide a link to additional information **55**. For example, as shown in FIG. **24**, selection of an item **84**, **102** can initiate the display of web page content via a web browser UI **110**. Similarly, the item **84**, **102** may provide a link for opening an attachment such as a media file, document, etc. which, when selected initiates the display of an attachment application UI **112** as shown in FIG. **25**, e.g., a photo viewer, media player, document viewer such as a spreadsheet or word processing application, etc.

Selection of an item **84**, **102** can also initiate the display of any other application in order to direct the user to particular additional information as shown in FIG. **26**. In FIG. **26**, a general application UI **114** is shown. In an example, a game invite, calendar invite, list item or other planner type item can be represented by an item **84**, **102** which, when selected, initiates the display of an associated application UI **114**, e.g., to begin playing a game, to view a calendar comprising the calendar appointment, etc.

Although the above examples illustrate the display of an information tab **76** and information pane **82** in association with an IM conversation UI **66**, it can be appreciated that the information tab **76** and pane **82** can be displayed with existing content in any other message exchange UI. For example, as shown in FIG. **27**, an SMS thread UI **116** including a previous message **120** and a reply message **118** can be configured to include the information tab **76**, in a manner similar to the IM conversation UI **66**. Similarly, as shown in FIG. **28**, an email thread UI **122** including a previous message **126** and reply **124** can be configured to include the information tab **76** to enable a touch and drag operation **78** to be used to enlarge the information tab **76** to reveal the items **84** in the information pane **82**. It can also be appreciated that the information tab **76** can also be displayed in other application UIs that can be associated with a contact. For example, as shown in FIG. **29**, a game application UI **128** can be configured to include the information tab **76** to enable a touch and drag operation **78** to be used to enlarge the information tab **76** to reveal the items **84** in the information pane **82** during game play.

FIG. **30** illustrates an example set of computer executable operations that may be performed in modifying an information tab **76** to provide notification of new additional information **55**, enabling the information tab **76** to be enlarged to provide an information pane **82**, and enabling selection of items **84** in the information pane **82**. New additional information **55** is obtained by the information pane module **52** at **200**. For example, the new additional information **55** may be received in a message or other packet of data sent by a server or system (e.g., P2P system **18**) or directly from a particular contact. The information tab **76** may then be modified or initially presented at **202** to indicate receipt of or otherwise the presence of new additional information **55**. The information pane module **52** may then enable the information tab **76** to be enlarged at **204**. It can be appreciated that the information tab **76** may also be able to be enlarged at other times. After detecting an input to enlarge the information tab **76** at **206** (e.g., a touch and drag operation **78**), the information pane module **52** may then determine at **208** when the resize of the information tab **76** has been completed (e.g., when the intermediate tab **80** has been enlarged to a predetermined width enabling the items **84** to be populated in the information pane **82**). Once the resizing of the information tab **76** has been completed and the information pane **82** is displayed, the items **84** can be included in the information pane **82** at **210**. The information pane module **52** may then provide the items **84** until detecting selection of an option associated with the information pane **82** at **212**. If selection is not detected at **212**, the information pane module **52** also determines at **214**, whether or not the information pane **82** should be closed. For example, an oppositely directed touch and drag operation **78** may be used to "slide" the information pane **82** back towards the edge of the UI thus returning to a state wherein the information tab **76** is instead displayed. The information pane **82** can also be operable to close after a predetermined amount of time has elapsed so as to only consume a portion of the UI for a brief period of time. If the information pane **82** is closed at **214**, the operations of FIG. **30** end at **216**.

Upon detecting selection of an option associated with the information pane **82** at **212**, if the Chat option **96** is available (e.g., wherein the information pane **82** has been displayed in the IM list view UI **90**), the information pane module **52** determines at **218** if a conversation is to be launched. If a conversation is to be launched, an IM conversation UI **66** with the associated contact is displayed at **220**. It can be appreciated that, as discussed above, navigation into a conversation can include displaying the items **84** in the information pane **82** along with the conversation history portion **70**.

If selection of an option associated with the information pane **82** is not selection of the Chat option **96**, the operations may proceed to A shown in FIG. **31**. At **226**, the information pane module **52** determines if all additional information **55** is to be displayed, e.g., if the selectable option **86** has been selected. If not, an application for a selected item **84** may be displayed at **228** (e.g., by launching a photo viewer, web browser, media player, document editor, social networking UI page UI **108**, calendar, game, etc.). The mobile device **10** may then determine at **230** when to close the application or attachment. If all of the additional information **55** is to be displayed (e.g., by detecting selection of the selectable option **86**), an activity view UI **106**, profile UI **98**, **104**, etc. for the associated contact is displayed at **232**. From the UI displaying the additional information **55**, the information pane module **52** may then determine at **234**, whether or not an item **102** has been selected. If so, an application for the selected item **102** may be displayed at **228** as discussed above. If an item **102** has not been selected, the information pane module **52** can determine whether or not to close the activity view UI **106** or profile UI **98**, **104** at **236**. If the UI is to be closed, the operations shown in FIG. **31** end at **238**.

As discussed above, the information pane **82** may also provide a parallel port or channel for exchanging data items **134** between mobile devices **10**. FIG. **32** illustrates an example communication system **8"** in which messages **132** are exchanged via a communication server **130** (e.g., P2P system **18**), and such data items **134** (i.e. additional information **55**) are exchanged separately from the flow of messages **132**, either through the same communication server **130** or another server **136**. For example, the communication server **130** may represent an SMSC for exchanging SMS messages. However, in order to enable additional information **55** to be provided via the information pane **82**, the other server **136** can be used to offload bandwidth from the communication server **130**, avoid excess data charges, and/or exchange data items **134** not supported by the protocol used by the communication server **130**. In this way, the information pane **82** can be used as both a display portal and a delivery portal.

FIG. **33** illustrates an example menu **138** that may be invoked in an IM conversation UI **66** for providing a Send item to info pane option **140** for initiating delivery of an item using the information pane **82**. By selecting the option **140**, a selected one or more items or representations thereof, may be sent to Contact A such that the items **84** are displayed in the information pane **84** rather than as attachments in messages or otherwise included in the conversation or other message exchange.

Referring now to FIG. **34**, shown therein is a block diagram of an example mobile device **10**. The mobile device **10** includes a number of components such as a main processor **302** that controls the overall operation of the mobile device **10**. Communication functions, including data and voice communications, are performed through a communication subsystem **54**. The communication subsystem **54** receives messages from and sends messages to a wireless network **12**. In this example mobile device **10**, the communication subsystem **54** is configured in accordance with the Global System for Mobile Communication (GSM) and General Packet Radio Services (GPRS) standards. The GSM/GPRS wireless network is used worldwide and it is expected that these standards will be superseded eventually

by 3G and 4G networks such as EDGE, UMTS and HSDPA, LTE, Wi-Max etc. New standards are still being defined, but it is believed that they will have similarities to the network behaviour described herein, and it will also be understood by persons skilled in the art that the examples described herein are intended to use any other suitable standards that are developed in the future. The wireless link connecting the communication subsystem **54** with the wireless network **12** represents one or more different Radio Frequency (RF) channels, operating according to defined protocols specified for GSM/GPRS communications. With newer network protocols, these channels are capable of supporting both circuit switched voice communications and packet switched data communications.

The main processor **302** also interacts with additional subsystems such as a Random Access Memory (RAM) **306**, a flash memory **308**, a display **58**, an auxiliary input/output (I/O) subsystem **312**, a data port **314**, a keyboard **316**, a speaker **318**, a microphone **320**, global positioning system (GPS) receiver **321**, short-range communications subsystem **322** and other device subsystems **324**.

Some of the subsystems of the mobile device **10** perform communication-related functions, whereas other subsystems may provide "resident" or on-device functions. By way of example, the display **58** and the keyboard **316** may be used for both communication-related functions, such as entering a text message for transmission over the network **12**, and device-resident functions such as a calculator or task list.

The mobile device **10** can send and receive communication signals over the wireless network **12** after required network registration or activation procedures have been completed. Network access is associated with a subscriber or user of the mobile device **10**. To identify a subscriber, the mobile device **10** may use a subscriber module. Examples of such subscriber modules include a Subscriber Identity Module (SIM) developed for GSM networks, a Removable User Identity Module (RUIM) developed for CDMA networks and a Universal Subscriber Identity Module (USIM) developed for 3G networks such as UMTS. In the example shown, a SIM/RUIM/USIM **326** is to be inserted into a SIM/RUIM/USIM interface **328** in order to communicate with a network. The SIM/RUIM/USIM component **326** is one type of a conventional "smart card" that can be used to identify a subscriber of the mobile device **10** and to personalize the mobile device **10**, among other things. Without the SIM/RUIM/USIM component **326**, the mobile device **10** may not be fully operational for communication with the wireless network **12**. By inserting the SIM/RUIM/USIM **326** into the SIM/RUIM/USIM interface **328**, a subscriber can access all subscribed services. Services may include: web browsing and messaging such as e-mail, voice mail, SMS, and MMS. More advanced services may include: point of sale, field service and sales force automation. The SIM/RUIM/USIM **326** includes a processor and memory for storing information. Once the SIM/RUIM/USIM **326** is inserted into the SIM/RUIM/USIM interface **328**, it is coupled to the main processor **302**. In order to identify the subscriber, the SIM/RUIM/USIM **326** can include some user parameters such as an International Mobile Subscriber Identity (IMSI). An advantage of using the SIM/RUIM/USIM **326** is that a subscriber is not necessarily bound by any single physical mobile device. The SIM/RUIM/USIM **326** may store additional subscriber information for a mobile device as well, including datebook (or calendar) information and recent call information. Alternatively, user identification information can also be programmed into the flash memory **308**.

The mobile device **10** is typically a battery-powered device and includes a battery interface **332** for receiving one or more batteries **330** (typically rechargeable). In at least some examples, the battery **330** can be a smart battery with an embedded microprocessor. The battery interface **332** is coupled to a regulator (not shown), which assists the battery **330** in providing power V+ to the mobile device **10**. Although current technology makes use of a battery, future technologies such as micro fuel cells may provide the power to the mobile device **10**.

The mobile device **10** also includes an operating system **334** and software components **336** to **346** which are described in more detail below. The operating system **334** and the software components **336** to **346** that are executed by the main processor **302** are typically stored in a persistent store such as the flash memory **308**, which may alternatively be a read-only memory (ROM) or similar storage element (not shown). Those skilled in the art will appreciate that portions of the operating system **334** and the software components **336** to **346**, such as specific device applications, or parts thereof, may be temporarily loaded into a volatile store such as the RAM **306**. Other software components can also be included, as is well known to those skilled in the art.

The subset of software applications **336** that control basic device operations, including data and voice communication applications, may be installed on the mobile device **10** during its manufacture. Other software applications include message applications **338** that can be any suitable software program that allows a user of the mobile device **10** to send and receive electronic messages, as described above. Various alternatives exist for the message application **338** as is well known to those skilled in the art. Messages that have been sent or received by the user are typically stored in the flash memory **308** of the mobile device **10** or some other suitable storage element in the mobile device **10**. In at least some examples, some of the sent and received messages may be stored remotely from the mobile device **10** such as in a data store of an associated host system that the mobile device **10** communicates with.

The software applications can further include a device state module **340**, a Personal Information Manager (PIM) **342**, and other suitable modules (not shown). The device state module **340** provides persistence, i.e. the device state module **340** ensures that important device data is stored in persistent memory, such as the flash memory **308**, so that the data is not lost when the mobile device **10** is turned off or loses power.

The PIM **342** includes functionality for organizing and managing data items of interest to the user, such as, but not limited to, e-mail, contacts, calendar events, voice mails, appointments, and task items. A PIM application has the ability to send and receive data items via the wireless network **12**. PIM data items may be seamlessly integrated, synchronized, and updated via the wireless network **12** with the mobile device subscriber's corresponding data items stored and/or associated with a host computer system. This functionality creates a mirrored host computer on the mobile device **10** with respect to such items. This can be particularly advantageous when the host computer system is the mobile device subscriber's office computer system.

The mobile device **10** may also comprise a connect module **344**, and an IT policy module **346**. The connect module **344** implements the communication protocols that are required for the mobile device **10** to communicate with the wireless infrastructure and any host system, such as an enterprise system, that the mobile device **10** is authorized to interface with.

The connect module **344** includes a set of APIs that can be integrated with the mobile device **10** to allow the mobile device **10** to use any number of services associated with the enterprise system. The connect module **344** allows the mobile device **10** to establish an end-to-end secure, authenticated communication pipe with a host system (not shown). A subset of applications for which access is provided by the connect module **344** can be used to pass IT policy commands from the host system to the mobile device **10**. This can be done in a wireless or wired manner. These instructions can then be passed to the IT policy module **346** to modify the configuration of the device **10**. Alternatively, in some cases, the IT policy update can also be done over a wired connection.

The IT policy module **346** receives IT policy data that encodes the IT policy. The IT policy module **346** then ensures that the IT policy data is authenticated by the mobile device **10**. The IT policy data can then be stored in the flash memory **308** in its native form. After the IT policy data is stored, a global notification can be sent by the IT policy module **346** to all of the applications residing on the mobile device **10**. Applications for which the IT policy may be applicable then respond by reading the IT policy data to look for IT policy rules that are applicable.

Other types of software applications or components **339** can also be installed on the mobile device **10**. These software applications **339** can be pre-installed applications (i.e. other than message application **338**) or third party applications, which are added after the manufacture of the mobile device **10**. Examples of third party applications include games, calculators, utilities, etc.

The additional applications **339** can be loaded onto the mobile device **10** through at least one of the wireless network **12**, the auxiliary I/O subsystem **312**, the data port **314**, the short-range communications subsystem **322**, or any other suitable device subsystem **324**. This flexibility in application installation increases the functionality of the mobile device **10** and may provide enhanced on-device functions, communication-related functions, or both. For example, secure communication applications may enable electronic commerce functions and other such financial transactions to be performed using the mobile device **10**.

The data port **314** enables a subscriber to set preferences through an external device or software application and extends the capabilities of the mobile device **10** by providing for information or software downloads to the mobile device **10** other than through a wireless communication network. The alternate download path may, for example, be used to load an encryption key onto the mobile device **10** through a direct and thus reliable and trusted connection to provide secure device communication.

The data port **314** can be any suitable port that enables data communication between the mobile device **10** and another computing device. The data port **314** can be a serial or a parallel port. In some instances, the data port **314** can be a universal serial bus (USB) port that includes data lines for data transfer and a supply line that can provide a charging current to charge the battery **330** of the mobile device **10**.

The short-range communications subsystem **322** provides for communication between the mobile device **10** and different systems or devices, without the use of the wireless network **12**. For example, the subsystem **322** may include an infrared device and associated circuits and components for short-range communication. Examples of short-range communication standards include standards developed by the Infrared Data Association (IrDA), Bluetooth, and the 802.11 family of standards developed by IEEE.

In use, a received signal such as a text message, an e-mail message, or web page download may be processed by the communication subsystem **54** and input to the main processor **302**. The main processor **302** may then process the received signal for output to the display **310** or alternatively to the auxiliary I/O subsystem **312**. A subscriber may also compose data items, such as e-mail messages, for example, using the keyboard **316** in conjunction with the display **310** and possibly the auxiliary I/O subsystem **312**. The auxiliary subsystem **312** may include devices such as: a touch screen, mouse, track ball, infrared fingerprint detector, or a roller wheel with dynamic button pressing capability. The keyboard **316** is an alphanumeric keyboard and/or telephone-type keypad. However, other types of keyboards may also be used, such as a virtual or "soft" keyboard rendered as images on a touch screen. A composed item may be transmitted over the wireless network **12** through the communication subsystem **54**.

For voice communications, the overall operation of the mobile device **10** in this example is substantially similar, except that the received signals are output to the speaker **318**, and signals for transmission are generated by the microphone **320**. Alternative voice or audio I/O subsystems, such as a voice message recording subsystem, can also be implemented on the mobile device **10**. Although voice or audio signal output is accomplished primarily through the speaker **318**, the display **310** can also be used to provide additional information such as the identity of a calling party, duration of a voice call, or other voice call related information.

It will be appreciated that any module or component exemplified herein that executes instructions may include or otherwise have access to computer readable media such as storage media, computer storage media, or data storage devices (removable and/or non-removable) such as, for example, magnetic disks, optical disks, or tape. Computer storage media may include volatile and non-volatile, removable and non-removable media implemented in any method or technology for storage of information, such as computer readable instructions, data structures, program modules, or other data. Examples of computer storage media include RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by an application, module, or both. Any such computer storage media may be part of the mobile device **10**, any component of or related to the wireless network **12**, etc., or accessible or connectable thereto. Any application or module herein described may be implemented using computer readable/executable instructions that may be stored or otherwise held by such computer readable media.

It will also be appreciated that the example embodiments and corresponding diagrams used herein are for illustrative purposes only. Different configurations and terminology can be used without departing from the principles expressed herein. For instance, components and modules can be added, deleted, modified, or arranged with differing connections without departing from these principles.

The steps or operations in the flow charts and diagrams described herein are just for example. There may be many variations to these steps or operations without departing from the spirit of the invention or inventions. For instance, the steps may be performed in a differing order, or steps may be added, deleted, or modified.

Although the above has been described with reference to certain specific embodiments, various modifications thereof will be apparent to those skilled in the art without departing from the scope of the claims appended hereto.

The invention claimed is:

1. A method of operating a mobile device, the method comprising:

displaying a message exchange user interface of a message exchange application, the message exchange user interface comprises a message exchange between a user of the mobile device and a contact of the user;

displaying a first object in a portion of the message exchange user interface without obstructing existing message exchange content in the message exchange user interface;

obtaining contextual information related to the contact, the contextual information being additional to the existing message exchange content displayed in the message exchange user interface and having been obtained on the mobile device, from at least one application other than the message exchange application to provide additional information regarding the contact during the message exchange;

changing an appearance of the first object from a first appearance to a second appearance in response to receipt of the contextual information, the second appearance being independent of a representation of the at least one application and independent of representing content of the contextual information;

in response to detecting a user selection of the first object, displaying a second object larger than the first object in the message exchange user interface, wherein the second object does not overlap the first object;

gradually enlarging the second object in the message exchange user interface during a drag operation applied to the second object, to provide a third object; and

displaying the additional contextual information related to the contact using the third object,

wherein a display of the existing message exchange content, based on the gradually enlarging the second object, is resized so that all of the existing message exchange content is not obstructed.

2. The method according to claim 1, wherein changing the appearance of the first object comprises displaying the second appearance as a visual wiggling motion of the first object.

3. The method according to claim 1, wherein the third object consumes a larger portion of a display screen than the second object without obstructing the existing message exchange content.

4. The method according to claim 1, further comprising:

after detecting a user input associated with the third object, removing the third object and redisplaying the first object.

5. The method according to claim 1, wherein the message exchange user interface is an instant messaging user interface, and wherein proving the third object comprises displaying the third object in the instant messaging user interface.

6. The method according to claim 1, wherein the first, second and third objects are displayed adjacent to messages exchanged with the contact.

7. The method according to claim 1, wherein the first, second and third objects are displayed in a banner portion of the message exchange user interface.

8. The method according to claim 1, wherein the first object comprises a blank tab, and wherein changing the appearance of the first object comprises changing one of a color of the blank tab or an intensity of a boarder of the blank tab.

9. A mobile device comprising a processor, a display, and memory, the memory storing computer executable instructions for:

displaying a message exchange user interface of a message exchange application, the message exchange user interface comprises a message exchange between a user of the mobile device and a contact of the user;

displaying a first object in a portion of the message exchange user interface without obstructing existing message exchange content in the message exchange user interface;

obtaining contextual information related to the contact, the contextual information being additional to the existing message exchange content displayed in the message exchange user interface and having been obtained on the mobile device, from at least one application other than the message exchange application to provide additional information regarding the contact during the message exchange;

changing an appearance of the first object from a first appearance to a second appearance in response to receipt of the contextual information, the second appearance being independent of a representation of the at least one application and independent of representing content of the contextual information;

in response to detecting a user selection of the first object, displaying a second object larger than the first object in the message exchange user interface, wherein the second object does not overlap the first object;

gradually enlarging the second object in the message exchange user interface during a drag operation applied to the second object, to provide a third object; and

displaying the additional contextual information related to the contact using the third object,

wherein a display of the existing message exchange content, based on the gradually enlarging the second object, is resized so that all of the existing message exchange content is not obstructed.

10. The mobile device according to claim 9, wherein changing the appearance of the first object comprises displaying the second appearance as a visual wiggling motion of the first object.

11. A non-transitory computer readable medium comprising computer executable instructions for operating a mobile device, the computer executable instruction comprising instructions for:

displaying a message exchange user interface of a message exchange application, the message exchange user interface comprising a message exchange between a user of the mobile device and a contact of the user;

displaying a first object in a portion of the message exchange user interface without obstructing existing message exchange content in the message exchange user interface;

obtaining contextual information related to the contact, the contextual information being additional to the existing message exchange content displayed in the message exchange user interface and having been obtained on the mobile device from at least one application other than the message exchange application to provide additional information regarding the contact during the message exchange;

changing an appearance of the first object from a first appearance to a second appearance in response to

receipt of the contextual information, the second appearance being independent of a representation of the at least one application and independent of representing content of the contextual information;

in response to detecting a user selection of the first object, displaying a second object larger than the first object in the message exchange user interface, wherein the second object does not overlap the first object;

gradually enlarging the second object in the message exchange user interface during a drag operation applied to the second object, to provide a third object; and

displaying the additional contextual information related to the contact using the third object,

wherein a display of the existing message exchange content, based on the gradually enlarging the second object, is resized so that all of the existing message exchange content is not obstructed.

12. The non-transitory computer readable medium according to claim **11**, wherein the third object consumes a larger portion of a display screen than the second object without obstructing the existing message exchange content.

13. The non-transitory computer readable medium according to claim **11**, further comprising instructions for:

after detecting a user input associated with the third object, removing the third object and redisplaying the first object.

14. The non-transitory computer readable medium according to claim **11**, wherein the message exchange user interface is an instant messaging user interface, and wherein proving the third object comprises displaying the third object in the instant messaging user interface.

15. The non-transitory computer readable medium according to claim **11**, wherein the first, second and third objects are displayed adjacent to messages exchanged with the contact.

16. The non-transitory computer readable medium according to claim **11**, wherein the first, second and third objects are displayed in a banner portion of the message exchange user interface.

17. A method of operating a mobile device, the method comprising:

displaying a list of a plurality of instant messaging contacts and their corresponding instant messaging conversations with a user of the mobile device in a first user interface for an instant messaging application;

displaying a first object in association with at least one of the list of instant messaging contacts without obstructing the list of a plurality of instant messaging contacts and their corresponding instant messaging conversations with the user;

obtaining contextual information related to a particular one of the at least one of the instant messaging contacts, the contextual information being additional to the instant messaging conversations and having been obtained on the mobile device, from at least one application other than the instant messaging application to provide additional information regarding the contact during a message exchange;

changing an appearance of the first object from a first appearance to a second appearance in response to receipt of the contextual information, the second appearance being independent of a representation of the at least one application and independent of representing content of the contextual information;

in response to detecting a user selection of the first object, displaying a second object larger than the first object in the first user interface, wherein the second object does not overlap the first object;

gradually enlarging the second object in the first user interface during a drag operation applied to the second object, to provide a third object; and

displaying the additional contextual information related to the particular one of the at least one of the instant messaging contacts using the third object,

wherein a display of the instant messaging conversations, based on the gradually enlarging the second object, is resized so that all of the instant messaging conversation is not obstructed.

18. The method according to claim **17**, further comprising: displaying the first object in an instant messaging conversation user interface for the particular one of the at least one instant messaging contacts, and wherein proving the third object comprises displaying the third object in the instant messaging user interface.

* * * * *